

RESTORATION ADVISORY BOARD MEETING

WEDNESDAY, JANUARY 29, 2003

NATIONAL CITY, CALIFORNIA

REPORTED BY: Nancy A. Lee, CSR No. 3870

LEE & ASSOCIATES

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A T T E N D A N C E

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NAVY REGION SOUTHWEST: Ms. Theresa Morley

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SOUTHWEST DIVISION NAVAL
FACILITIES ENGINEERING

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COMMAND:

Mr. Ed Dias

Mr. Mike Corry

6

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DTSC:

Mr. Douglas Bautista

Mr. Dave Murchison

8

9

BECHTEL NATIONAL:

Mr. Tim Heironimus

Ms. Karen G. Collins

10

Mr. Pete Stang

11

PUBLIC WORKS OFFICER:

Commander James Wink

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FOSTER/WHEELER
ENVIRONMENTAL:

Mr. Glenn Starr

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PUBLIC ATTENDANCE:

Ms. Anita Boyd

16

Ms. Nancy Lee

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RAB MEMBERS:

Mr. Peter Bishop

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Mr. Jerry McNutt

Ms. Rita McIntyre

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1 NATIONAL CITY, CA., WEDNESDAY, JANUARY 29, 2003

2 5:38 P.M.

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17:38:41 4 MS. MORLEY: Welcome everybody.

17:38:45 5 I was told today that this is the

17:38:48 6 last -- this club is going to be remodeling, so

17:38:51 7 this will be the last meeting here for probably

17:38:53 8 this year. They're going to start March 1st

17:38:56 9 through December. Elizabeth, the club manager, is

17:38:58 10 going to find us some place else on Naval Station,

17:39:01 11 possibly the Mariner's Club, but that might mean

17:39:01 12 that we have to move to a Thursday.

17:39:06 13 Is that going to be a problem for

17:39:07 14 anybody? Okay. So we'll let you know. We'll

17:39:13 15 have maps and a big sign so you know not to come

17:39:16 16 here next time.

17:39:17 17 Introductions: I think you know

17:39:18 18 everybody except for Mike Corry. He used to be an

17:39:23 19 intern and now he's actually a real employee, so

17:39:26 20 we have to be a lot nicer to him. He's going to

17:39:33 21 be taking over the 28th Street gas station, Site

17:39:37 22 10?

17:39:37 23 MR. CORRY: Site 10.

17:39:39 24 MS. MORLEY: So he'll be helping out Darren

17:39:41 25 and Ed. Darren's sick tonight, so he's at home.

17:39:44 1 And I think you guys know Glenn Starr
17:39:45 2 from Foster/Wheeler. He was here about a year ago
17:39:51 3 talking about Site 2, and I think you remember
17:39:53 4 everybody else.

17:39:54 5 Does anyone have any comments on the
17:39:57 6 meeting minutes from the last RAB? Okay. We'll
17:40:00 7 consider those approved.

17:40:02 8 With that, Glenn, we'll start off with
17:40:03 9 you. Glenn is going to talk about the progress
17:40:06 10 made on Sub-Site 2A, which is a removal action at
17:40:09 11 the Mole pier.

17:40:17 12 MR. STARR: As Theresa mentioned, my name
17:40:18 13 is Glenn Starr. I'm the project manager for the
17:40:22 14 Mole pier project at Sub-Site 2A, and I've been
17:40:25 15 that project manager for about the last three
17:40:27 16 years.

17:40:28 17 I'll start out with a little bit of
17:40:49 18 history at Sub-Site 2A. Actually, RI Site 2 was
17:40:53 19 created in 1942 with hydraulic fill material.
17:40:56 20 From approximately 1945 to 1972 much of IR
17:41:00 21 Sub-Site 2A, a smaller portion of Site 2, was used
17:41:04 22 for disposal and open burning of demolition debris
17:41:05 23 and hazardous waste.

17:41:09 24 The petroleum based materials
17:41:10 25 including gasoline, motor oil, and diesel fuel

17:41:11 1 were transported to the site, and they were used
17:41:17 2 to assist in the open burning of debris and
17:41:18 3 combustible materials.

17:41:20 4 The waste included pilings, lumber,
17:41:25 5 concrete, asphalt, and other combustible and
17:41:27 6 non-combustible materials, and this all came from
17:41:31 7 the former Navy repair base and the Navy Public
17:41:34 8 Works Center and from state and maintenance
17:41:35 9 operations. The area was finally covered with
17:41:41 10 fill material after the waste at Mole pier was
17:41:43 11 completed in 1972.

17:41:45 12 We were tasked and put under contract
17:41:45 13 by the Navy to perform a remedial action at Site
17:41:45 14 2. The purpose of this non-time critical removal
17:41:45 15 action was two purposes --

16 (At this time the power was
17 temporarily shut off, and there was a brief recess
18 while the problem was corrected.)

17:47:26 19 As I was starting to say, the purpose
17:47:28 20 of the non-time critical removal action is
17:47:30 21 actually two goals in one. One was to reduce the
17:47:32 22 contaminated soil concentrations to levels that
17:47:35 23 were protective of the human health and provide
17:47:38 24 unrestricted future land use for the site; and the
17:47:40 25 second was to contain, reduce or eliminate

17:47:43 1 exposure pathways for the contaminated sediments
17:47:44 2 or I should say the contaminated soil.

17:47:49 3 There were five primary chemicals of
17:47:54 4 concern originally identified within the removal
17:47:54 5 action, the first being arsenic; the second was
17:47:57 6 hexavalent chromium; dioxins, lead, and various
17:47:59 7 polyaeromatic hydrocarbons or PAHs.

17:48:06 8 Sub-Site 2A is approximately six and a
17:48:09 9 half acres in size and extends from the western
17:48:11 10 border of the Mole pier to approximately 750 feet.
17:48:15 11 Most of the area today is paved with asphalt and
17:48:18 12 concrete, and contains some work areas for the
17:48:21 13 Public Works center and parking areas and
17:48:24 14 greenbelts.

17:48:26 15 This is a drawing of Sub-Site 2A and
17:48:31 16 was actually how Sub-Site 2A existed before our
17:48:34 17 removal action. Sub-Site 2A is bordered by this
17:48:35 18 fence right here, runs along Mole Road and then
17:48:41 19 back on 7th Street. It's six and a half acres in
17:48:43 20 size. And what you'll notice is the blue squares
17:48:43 21 are the number of buildings that were present on
17:48:48 22 the site before we started the removal action.

17:48:50 23 The building located in this area was
17:48:52 24 actually a Navy consolidated dive unit, which we
17:48:55 25 had to relocate to a different area of Naval

17:48:55 1 Station prior to the removal action. We built a
17:49:02 2 large temporary support complex for the Navy dive
17:49:06 3 unit.

17:49:06 4 Right here you'll see in a later photo
17:49:08 5 is the Navy Public Works paint shop. Our original
17:49:15 6 plan was to do this removal action throughout this
17:49:16 7 area and let the paint shop continue operating
17:49:17 8 while we're doing the dig.

17:49:20 9 This is a photo today of Sub-Site 2A.
17:49:24 10 It's actually a photo taken just about four weeks
17:49:27 11 ago. Here the red line is the boundary of
17:49:30 12 Sub-Site 2A. Today there's a parking lot. These
17:49:30 13 are the greenbelts we were talking about. The CBs
17:49:36 14 all actually building a volleyball court and some
17:49:37 15 other recreational facilities along this area.

17:49:42 16 The paint shop is now gone. I'll talk
17:49:44 17 some more about that, and all the buildings that
17:49:46 18 originally supported the dive unit are also gone.

17:49:49 19 The remediation was performed in
17:49:54 20 actually seven distinct phases, and we had to do
17:49:57 21 those phases for a couple of reasons. One, we had
17:49:57 22 to support the ongoing fleet operation that takes
17:50:01 23 place in the Mole pier area. Specifically,
17:50:03 24 originally our plan was to maintain the paint shop
17:50:06 25 operations, and also there was a continuing

17:50:09 1 increase in scope for the contaminated soil that
17:50:11 2 had to be removed as part of this removal action.
17:50:14 3 The original plan that we actually put
17:50:16 4 out for Sub-Site 2A only identified two work
17:50:18 5 phases, Phases 1 and 2. Phases 3, 4, 5, 6, and 7
17:50:22 6 were added for a variety of reasons. The basic
17:50:26 7 reason is right before we actually did the removal
17:50:28 8 action, we took a number of reconstruction samples
17:50:30 9 around the boundary of the site and found out that
17:50:30 10 the lateral extent of the contamination of the
17:50:31 11 soil was a lot more extensive than originally
17:50:36 12 thought, and I'll talk some more about Phases 6
17:50:40 13 and 7.

17:50:42 14 But Phase 6, some additional
17:50:43 15 investigation was done well outside the original
17:50:46 16 boundary of the removal action and found
17:50:48 17 additional contamination, and Phase 7 was actually
17:50:50 18 an area where a former hazardous waste yard was
17:50:55 19 located.

17:50:56 20 And here's a map. If you can slide
17:50:58 21 over to the first slide I had, this shows the
17:50:58 22 different phases. This is Phase 2A and 2B, 1A and
17:51:04 23 1B. And I should point out the reason there's an
17:51:07 24 A and a B was because the paint shop was located
17:51:09 25 approximately right here. They had the paint shop

17:51:13 1 basically as a drive-through facility, and so we
17:51:15 2 were going to do our excavation on one side of
17:51:17 3 that paint shop. Once that was complete and
17:51:17 4 backfilled and restored, then we would go ahead
17:51:20 5 and work on the other side, split the paint shop
17:51:20 6 and keep working.

17:51:27 7 I don't have the original boundaries
17:51:29 8 of Phase 2 and Phase 1, but these boundaries are
17:51:29 9 actually quite a bit wider than they originally
17:51:33 10 were intended based on preconstruction sampling
17:51:36 11 that was performed. Phase 3 was also added
17:51:38 12 because of the results of preconstruction sampling
17:51:39 13 along with Phase 4.

17:51:45 14 Phase 5 we did some additional
17:51:41 15 sampling next to an existing Public Works Center
17:51:45 16 building, Building 199, and found additional
17:51:49 17 contamination in this specific area, so the soil
17:51:52 18 was excavated and disposed of.

17:51:54 19 Phase 6, as I earlier mentioned, was a
17:51:57 20 site investigation for this area that was
17:51:58 21 predominantly downwind from the burn pit, and we
17:52:01 22 had to do some hot spot excavation to remove the
17:52:03 23 contaminants effective there.

17:52:06 24 And Phase 7, which is the former
17:52:07 25 hazardous waste yard, is the area that we are

17:52:10 1 presently just completely our excavation and
17:52:11 2 restoration efforts.

17:52:14 3 And I should point out that Phase 2
17:52:19 4 was actually where the real burn pit was located.
17:52:21 5 And I can't remember if I said this or not, but
17:52:23 6 I'll repeat it. Phase 1 was originally planned to
17:52:23 7 go only to five feet in depth, but based on
17:52:23 8 samples we took when we reached the five-foot
17:52:27 9 level, we took samples down to ten feet and found
17:52:30 10 out that contamination also existed at that depth,
17:52:32 11 and so this phase was also dug to ten feet or
17:52:32 12 groundwater, whichever was deeper.

17:52:42 13 Here's a photo from our Phase 1. Here
17:52:43 14 is the paint shop. We're just working on the
17:52:47 15 western boundary now. The original plan was that
17:52:50 16 we were going to leave the paint shop in place,
17:52:52 17 and we were actually going to put in 40 or 60 mil
17:52:53 18 plastic sheeting around all the soil to
17:52:57 19 encapsulate that contaminated soil so we didn't
17:52:59 20 have to worry about recontaminating the clean
17:53:02 21 backfill. The decision was later made by the Navy
17:53:02 22 that that's not what they wanted to do. This
17:53:05 23 building was actually demolished, and all the soil
17:53:05 24 underneath the building was excavated.

17:53:11 25 Here's another aerial photo showing

17:53:14 1 the Phase 1 activity. As you can see now, the
17:53:16 2 paint shop that was located here is already gone.
17:53:20 3 We then abandoned our phase approach where we had
17:53:21 4 the A's and B's, and we basically started working
17:53:21 5 throughout the site. We're currently taking both
17:53:26 6 Phase 2 and Phase 1 here. On this side of this
17:53:32 7 line you'll see that we're actually backfilling
17:53:33 8 the area from our previous excavation.

17:53:37 9 The black areas -- the dark areas are
17:53:37 10 actually where we're stockpiling our contaminated
17:53:38 11 soil for profiling and eventual off-site transport
17:53:42 12 for disposal.

17:53:45 13 This is a photo of Phase 2 just
17:53:50 14 showing part of the dig. This area right here is
17:53:55 15 a high voltage duct bank, and we encountered a
17:53:57 16 number of these when we were digging up the site.
17:53:57 17 And we had to support these duct banks basically
17:54:00 18 by putting a light soil fill underneath the duct
17:54:05 19 bank so that we could actually dig below those and
17:54:05 20 then restore the site.

17:54:12 21 MR. WOEMPNER: I have a question. On your
17:54:09 22 backfill, what are you backfilling it with?

17:54:14 23 MR. STARR: Actually, the backfill was --
17:54:14 24 there was two kinds of backfill. The first three
17:54:18 25 feet of backfill was actually a crush rock, about

17:54:21 1 a four-inch crush. The thought was there that we
17:54:24 2 wanted to put about three feet of rock between the
17:54:26 3 groundwater table and the clean backfill so that
17:54:29 4 we didn't have to worry about anything in the
17:54:29 5 groundwater affecting the clean backfill we put
17:54:33 6 in. And the backfill was what we call FS15 which
17:54:34 7 is essentially a sandy low.

17:54:38 8 MR. WOEMPNER: Do you import that -- bring
17:54:38 9 it in?

17:54:41 10 MR. STARR: We bring it in from outside.
17:54:41 11 And we would also sample all the backfill before
17:54:44 12 we brought it on site to make sure that we weren't
17:54:44 13 bringing something dirty back on the site we just
17:54:46 14 cleaned up.

17:54:50 15 MR. WOEMPNER: Thank you.

17:54:52 16 MR. STARR: Here's another aerial photo. I
17:54:54 17 do want to point out one thing here is if you look
17:54:58 18 in this particular area, that green is actually
17:55:01 19 water, and you'll see some black along the edges
17:55:04 20 leaking in.

17:55:05 21 When we were digging up the actual
17:55:05 22 burn pit area in Phrase 2, we encountered
17:55:08 23 extensive diesel contamination right at the
17:55:10 24 groundwater level. We did additional testing and
17:55:12 25 found out that diesel can impact the soil. It was

17:55:13 1 actually extended down to 15 feet below ground
17:55:13 2 surface or five feet below the water table. So we
17:55:20 3 had to go back and dig out all this decontaminated
17:55:21 4 soil also down to 15 feet essentially in an area
17:55:26 5 about like this size, pretty much where the
17:55:31 6 footprint of the burn pit was.

17:55:37 7 Here you see we're still doing our
17:55:39 8 clean backfill here. This is the rock I was
17:55:41 9 talking about. You can see we put the rock in,
17:55:44 10 and they're still digging up parts of the phase
17:55:47 11 right here. And, again, there are the stockpiles
17:55:47 12 that we have on site for disposal.

17:55:52 13 This is just a quick shot of Phase 3.
17:55:53 14 It's pretty much a small sliver, so we could go
17:55:56 15 ahead and dig this out. And I forgot to talk
17:55:59 16 about the totals. We took about 10,000 tons of
17:56:01 17 soil out of Phase 3.

17:56:04 18 MR. WOEMPNER: Is that just contaminated
17:56:05 19 water?

17:56:07 20 MR. STARR: It's the green water you saw
17:56:07 21 from the photo. It's not contaminated, but since
17:56:07 22 we were digging this in the summertime, it was
17:56:10 23 stagnant. So we basically got an algae growth in
17:56:10 24 it, and that's why it's green.

17:56:17 25 MR. WOEMPNER: Okay.

17:56:18 1 MR. STARR: Here is another duct bank that
17:56:19 2 we exposed when we were doing the dig. This is
17:56:24 3 another high voltage power line that goes across
17:56:27 4 the site, and that was for Phase 4.

17:56:31 5 One interesting thing we did right
17:56:34 6 before we started the removal action based on
17:56:36 7 input from the regulatory agencies, we also had to
17:56:39 8 add a radiological survey to our dig to determine
17:56:43 9 if there was any low voltage radioactive point
17:56:44 10 sources on the site.

17:56:47 11 And to briefly go over what that
17:56:48 12 survey entailed, we basically had what we called a
17:56:49 13 RAD meter, and we would have to do three surveys
17:56:55 14 on the soil to find out if we had these small
17:56:55 15 point sources. The first we would actually
17:56:58 16 perform while the soil was in the ground or
17:57:00 17 in-situ. And then we would dig out the soil, and
17:57:00 18 we had to dig it out in two-foot lifts because the
17:57:06 19 meter could only detect a point source at two feet
17:57:09 20 in depth. Once we took it out, we took it to the
17:57:11 21 stockpile area, spread it out flat 18 inches
17:57:13 22 thick, and then we'd survey it a second time. And
17:57:16 23 then right before we would dispose of that soil,
17:57:16 24 we'd lay it back out again a third time in 18-inch
17:57:20 25 lifts and survey it a third time.

17:57:23 1 Through that three survey process --
17:57:25 2 I'd like to point out that everything was found in
17:57:25 3 the first two surveys. We found 31 low voltage
17:57:29 4 radioactive point sources.
17:57:31 5 The photo here of one of the point
17:57:33 6 sources happens to be the biggest one we ever
17:57:34 7 found. Most were about the size of a dime, and
17:57:39 8 probably 10 or 12 of those were the size of a pea.
17:57:43 9 So this is like finding 31 needles in a very large
17:57:46 10 haystack.
17:57:47 11 The point sources were isolated. We
17:57:49 12 sent them to a radiological lab to be evaluated
17:57:52 13 and find out what they were, and then they were
17:57:52 14 essentially either destroyed by the lab as part of
17:57:55 15 their analysis process or shipped off to the
17:58:00 16 appropriate disposal facility for disposition.
17:58:02 17 I also need to point out when we were
17:58:04 18 going through our survey, we found some soil that
17:58:07 19 exhibited properties that may have been low-level
17:58:11 20 radioactive waste. And just to explain, the Navy
17:58:13 21 has -- the Navy or DoD guidelines is whenever
17:58:17 22 you're detecting something that's considered one
17:58:20 23 and a half times background -- that is, the counts
17:58:22 24 coming off the soil was one and a half times the
17:58:24 25 background you've already established, that's the

17:58:26 1 action level for the Navy. The regulatory action
17:58:27 2 level is two times the background. The particular
17:58:31 3 soil we found was between one and a half and two,
17:58:33 4 so technically from a regulatory standpoint, it
17:58:35 5 was not low voltage radioactive waste, but the
17:58:35 6 Navy chose to deal with it that way and dispose of
17:58:40 7 it in Texas.

17:58:42 8 This is just a photo of Phase 5. This
17:58:48 9 was the former building 199 just before it was
17:58:51 10 demolished and we excavated below it.

17:58:54 11 Here's another picture from the aerial
17:58:57 12 view. It's kind of showing Phases 3, 4, and 5.
17:58:59 13 We've already now moved out and taken care of
17:59:02 14 Phase 3 and Phase 4. This is Phase 5. We haven't
17:59:06 15 quite gotten to the digging yet. As you can see,
17:59:07 16 we've now backfilled the area. I showed you
17:59:11 17 earlier it had the gravel. That's done.

17:59:13 18 We're still working on the excavation
17:59:15 19 on this side, and you can still see where our
17:59:17 20 stockpile area is.

17:59:19 21 And this is a question that came up
17:59:20 22 quite a while ago. This is actually clean fill,
17:59:23 23 and so one of the questions we kept getting asked
17:59:25 24 was how do you know that the dirty stuff you're
17:59:31 25 stockpiling as clean fill isn't contaminating the

17:59:31 1 site. And the way we constructed the stockpile
17:59:31 2 areas is we basically had 20 mil high-density
17:59:35 3 polyethylene sheeting we put on the ground. On
17:59:38 4 top of that we put 12 inches of the FS-15 backfill
17:59:41 5 that we were using, and then put another 20 mil
17:59:43 6 ATCE new liner on top of that and sandbagged the
17:59:46 7 berm.

17:59:49 8 When we're using the heavy equipment,
17:59:49 9 the potential always exists that you put a hole
17:59:49 10 through the top layer of the ATCE, but the 12-inch
17:59:49 11 cushion layer always protects the liner that's on
17:59:52 12 the bottom. In fact, every time we pull those up,
18:00:00 13 all the bottom liners are always intact. And
18:00:02 14 you'll also see this particular hall ramp right
18:00:04 15 here. We also built the same ramp in here, so
18:00:07 16 we're moving back from the contaminated areas to
18:00:09 17 the clean areas so we won't recontaminate the
18:00:11 18 site.

18:00:11 19 This is a photo of Phase 6. This was
18:00:16 20 based on additional sampling we had done. We took
18:00:19 21 about 10,000 tons out of this area, a number of
18:00:19 22 hot spots removed. What's interesting is this
18:00:19 23 existing building was basically a weld shop, and
18:00:27 24 the original plan was to actually deconstruct this
18:00:29 25 prefabricated building, dig out the contaminated

18:00:29 1 soil beneath the building, and then reconstruct it
18:00:29 2 back on site. We actually came up with a method
18:00:29 3 where we could actually get four deep caissons to
18:00:37 4 support the structure while we could dig around
18:00:42 5 it, so we never had to take the building down, and
18:00:42 6 it shortened the downtime for the weld shop and
18:00:42 7 also reduced the cost of the actual removal
18:00:42 8 action.

18:00:52 9 And here's a photo of Phase 6 from the
18:00:56 10 air. You can see one hot spot we're taking out
18:00:59 11 here. We have another hot spot, large area we're
18:01:03 12 taking out in this location. You can see that the
18:01:04 13 main Sub-site 2 area has already been restored,
18:01:05 14 and this is another hot spot -- that's on there
18:01:11 15 and this is a small one right here.

18:01:14 16 And Phase 7 has to do with what they
18:01:18 17 refer to as a collection, storage, transfer
18:01:19 18 facility in the old haz waste yard. We're just
18:01:24 19 wrapping that work up now. We took out about
18:01:25 20 another 12,000 tons of contaminated soil, and
18:01:29 21 basically dug a couple of footprints of the old
18:01:30 22 haz waste yard. And this is a photo of the work
18:01:34 23 we're doing in that location.

18:01:37 24 MR. WOEMPNER: That last one, is that the
18:01:37 25 Brinzer Street parking lot?

18:01:39 1 MR. STARR: Pardon me?

18:01:39 2 MR. WOEMPNER: Is that the Brinzer Street

18:01:39 3 parking lot?

18:01:40 4 MR. STARR: I'm not sure. This is actually

18:01:46 5 7th Street right here in this photo.

18:01:51 6 MR. WOEMPNER: Where you took off and

18:01:52 7 excavated?

18:02:00 8 MS. MORLEY: Brinzer Street is over here

18:02:00 9 and this is where the work was.

18:02:03 10 MR. WOEMPNER: Okay. It's not the same.

18:02:05 11 MS. COLLINS: Since most of the IR sites at

18:02:05 12 Naval Station are parking lots, it's confusing.

18:02:12 13 MR. STARR: And here's the most recent

18:02:16 14 aerial photo we have. It's actually not the most

18:02:20 15 recent. Again, you can see the area where we have

18:02:24 16 had the site restored. This area right here is

18:02:29 17 actually our stockpile area for the soil we've

18:02:29 18 been digging out of the CST, and that's the

18:02:32 19 stockpile profile, and we hauled that off to an

18:02:35 20 off-site disposal just like we did with the rest

18:02:35 21 of Sub-Site 2A.

18:02:40 22 As we performed all of our excavation

18:02:43 23 operations, we would collect confirmation soil

18:02:45 24 samples to evaluate the effectiveness of the

18:02:46 25 removal action. The samples were collected from

18:02:46 1 two areas: one on the sidewall. Every 75 lineal
18:02:55 2 feet we would take a sidewall sample to see if we
18:02:57 3 could confirm that we had the lateral extent of
18:02:57 4 the contamination taken care of. And then we also
18:02:57 5 took samples from the floor of the excavation
18:03:03 6 whether we were at groundwater or below
18:03:08 7 groundwater on a 75-by-75-foot grid, so at least
18:03:12 8 we could document anything that may have been left
18:03:15 9 behind.

18:03:15 10 But essentially once we dug to
18:03:15 11 groundwater, we didn't dig any deeper except for
18:03:20 12 the diesel contaminated soil.

18:03:22 13 These are results of the confirmation
18:03:22 14 samples for Phases 1 through 5. We had actually
18:03:30 15 36 confirmation samples with concentrations
18:03:32 16 greater than or equal to the target cleanup
18:03:32 17 levels. These were 11 sidewalls and 24 floors.

18:03:41 18 Primarily the contaminants that we had
18:03:42 19 problems with in the confirmation samples was
18:03:45 20 almost predominantly hexavalent chrome.
18:03:48 21 Hexavalent chrome in the cleanup goal was .2 parts
18:03:50 22 per million. In a lot of our hits we got
18:03:53 23 initially hexavalent chrome were at a .21 to like
18:03:58 24 .6 parts per million range, and we also detected a
18:04:03 25 few PAHs. I believe those were all from the

18:04:05 1 floors.

18:04:07 2 Phase 6 we had six confirmation
18:04:08 3 samples: four sidewalls, two floor samples that
18:04:11 4 exceeded our cleanup goals. Again, those were
18:04:11 5 primarily hex chrome with a few PAHs.

18:04:19 6 Based on the work that's complete, we
18:04:25 7 believe that the removal action reduced health and
18:04:27 8 contaminant concentrations to acceptable levels
18:04:29 9 with respect to the human health. We have
18:04:33 10 accomplished this through education and off-site
18:04:34 11 disposal, and the contaminated soil and
18:04:37 12 appropriate EPA certified in both facilities, and
18:04:41 13 the removal action has also substantially
18:04:41 14 eliminated any identified pathways for exposure.

18:04:47 15 Right now a closure report has been
18:04:51 16 drafted. It's undergoing Navy review. And at
18:04:54 17 this point I guess I'm passing the baton to
18:04:55 18 Bechtel, since my work is about complete after
18:04:59 19 three years at Mole pier, and we're going to be
18:05:01 20 talking about the RI.

18:05:03 21 Any questions? Thank you.

18:05:15 22 MS. MORLEY: Does anyone have questions for
18:05:17 23 Glenn? Okay.

18:05:31 24 MR. BISHOP: Pete Stang, Bechtel
18:05:31 25 Environmental, Inc., "Site 2, The Next Step."

18:05:35 1 MR. STANG: Glenn, you could have at least
18:05:35 2 passed off the ceremonial pointer here. I'm
18:05:58 3 disappointed.

18:05:58 4 As Foster/Wheeler and the Navy
18:05:58 5 complete the removal action at Sub-Site 2A, the
18:06:05 6 next step is to investigate the entire Site 2.

18:06:10 7 As Glenn focused on six and a half
18:06:14 8 acres, Sub-Site 2A, the next step is to evaluate
18:06:15 9 the entire Mole pier, about 23 acres.

18:06:19 10 A little bit of history about the
18:06:23 11 site. Mole pier was actually part of San Diego
18:06:28 12 Bay up until approximately 1941. This is Paleta
18:06:34 13 Creek, and we can actually see the dredge material
18:06:42 14 construction of the portion of Naval Station on
18:06:46 15 the west side south of Paleta Creek. This is
18:06:49 16 essentially 7th Street, and this represents the
18:06:55 17 triangular portion of Mole pier site.

18:07:00 18 I guess we can see a little bit -- you
18:07:01 19 can actually see the dredge line out here where
18:07:05 20 the dredge material was being brought up from the
18:07:07 21 dredge barge here in San Diego Bay and
18:07:09 22 hydraulically pumped onto Mole pier --

18:07:13 23 As Glenn also mentioned, between 1945
18:07:20 24 and the 1970s there were significant disposal
18:07:24 25 activities that occurred at numerous locations on

18:07:28 1 Mole pier. Sub-Site 2A, the main disposal pit,
18:07:31 2 where there was petroleum deposited into
18:07:38 3 construction and other types of debris and burned
18:07:41 4 periodically in Sub-Site 2A.

18:07:45 5 This portion of the site is 2G, the
18:07:46 6 wharf builders yard, which was apparently a heavy
18:07:54 7 petroleum creosote type facility where piers, pile
18:08:01 8 timber was treated with creosote for the purpose
18:08:05 9 of pier and quay wall construction. There's also
18:08:12 10 in this photo a fairly open area here to the east
18:08:17 11 side of the site, which we refer to as 2D, 2E in
18:08:23 12 this area, 2B down here where there was a
18:08:30 13 significant amount of time from the '50s to the
18:08:31 14 '80s of brow and platform painting, sanding,
18:08:38 15 blasting, general industrial activity of that
18:08:40 16 nature.

18:08:41 17 In a circa 1960 photo, again, a pretty
18:08:50 18 good view of the Mole pier disposal area 2A.
18:08:55 19 What's been referred to in the past as a disposal
18:08:56 20 trench running through the eastern third of Mole
18:09:05 21 pier and some discolored soils here that represent
18:09:10 22 again the brow and platform painting and scraping
18:09:16 23 area.

18:09:16 24 The one thing I would like to point
18:09:18 25 out, during all the iterations, 7th Street even in

18:09:26 1 the early 1940s was always present. Apparently,
18:09:29 2 based on the construction of the quay wall and
18:09:33 3 historic utilities, was not directly part of the
18:09:39 4 waste deposition area was an inherent structure
18:09:41 5 throughout the history of Mole pier.

18:09:45 6 This is, I believe, about a year old
18:09:49 7 photo of Mole pier, oblique angle. It shows the
18:09:52 8 current condition of Mole pier with Sub-Site 2A
18:09:55 9 that Glenn already explained in great detail for
18:10:01 10 us; the CST, the area where the Navy manages
18:10:07 11 sediment dewatering and characterization
18:10:12 12 activities to support the ongoing maintenance
18:10:15 13 dredging activities and construction dredging
18:10:17 14 activities within San Diego Bay; the Navy
18:10:23 15 recycling facility; the Navy hazmart where small
18:10:31 16 quantities of paints, lacquers, things of that
18:10:35 17 nature are basically maintained for distribution
18:10:38 18 to even smaller activities. It's to keep the
18:10:43 19 paint lockers and what have you with just the bare
18:10:45 20 minimum of what's necessary in the individual
18:10:49 21 activities.

18:10:50 22 And a diagram showing how the
18:10:57 23 different subsites are identified throughout.
18:11:00 24 These circular structures here were essentially
18:11:04 25 the old ball fields, the outfield census for the

18:11:08 1 Navy ball fields out there. Some of these
18:11:11 2 designations: 2A is generally equivalent to some
18:11:18 3 of the industrial practices that have gone on. In
18:11:22 4 the case of 2C there really wasn't a defined
18:11:26 5 industrial activity. The site boundary is simply
18:11:29 6 a fence line. These boundaries help the Navy to
18:11:33 7 administratively define some of these areas for
18:11:36 8 keeping track of past and present land use.

18:11:40 9 This is pretty much a description of
18:11:46 10 what we've talked about here. There are some
18:11:49 11 former RC/RA related facilities. The CST
18:11:54 12 collection, storage, and transport facility was
18:11:58 13 essentially the hazardous waste collection
18:12:02 14 facility. And prior to the RC/RA part B permit
18:12:09 15 that was put in place in 1993 for Naval Station,
18:12:12 16 SWMU 5 and SWMU 6 were both completely contained
18:12:18 17 within 2A. SWMU 5 has been completely excavated
18:12:22 18 to approximately 12 to 14 feet in that area of the
18:12:28 19 removal action, and over 50 percent of SWMU 6, the
18:12:33 20 old paint shop, sandblast grid piles has been
18:12:38 21 completely excavated or over 50 percent has been
18:12:42 22 excavated during the 2A removal action.

18:12:46 23 In 1996 the creosote pit that I showed
18:12:51 24 at 2G was primarily excavated with confirmation
18:12:56 25 samples collected and a report completed

18:13:02 1 describing the activities. The Sub-Site 2A
18:13:09 2 removal action that Glenn has spoken to us about
18:13:11 3 is also part of the current condition and status.
18:13:14 4 Current conditions and status of Mole
18:13:21 5 pier is primarily fleet support and industrial.
18:13:23 6 Parking, dredge material handling within Sub-Site
18:13:27 7 2G, the hazmart facility, Navy recycling facility
18:13:35 8 where not only the typical things you might think
18:13:36 9 of recycling -- aluminum, cardboard, newspaper --
18:13:40 10 but also construction debris where the Navy has a
18:13:45 11 good program where asphalt/concrete can be brought
18:13:49 12 there, crushed into aggregate, and reused either
18:13:54 13 within the facility or actually sold for other
18:13:57 14 beneficial use purposes.
18:14:00 15 Offices and temporary paint shop
18:14:02 16 facility that was moved when the original paint
18:14:07 17 shop was dismantled and removed approximately two
18:14:11 18 years ago.
18:14:13 19 Overall, again, the site looking at
18:14:22 20 what Glenn has talked about with a tremendous
18:14:26 21 amount of the sampling activity, the significant
18:14:29 22 amount of effort for the Navy and by the Navy to
18:14:36 23 perform the removal action here to bring it to
18:14:40 24 constructive reuse as a parking facility, install
18:14:44 25 the greenbelt buffer to minimize storm water

18:14:48 1 runoff from the parking area to San Diego Bay,
18:14:51 2 allow for infiltration to minimize non-point
18:14:56 3 source discharge to San Diego Bay.

18:15:00 4 And now it's time to characterize the
18:15:03 5 rest of the site from a soil and groundwater
18:15:05 6 standpoint.

18:15:07 7 There have been a lot of
18:15:10 8 investigations, and certainly some of these helped
18:15:15 9 us identify that Sub-Site 2A with the information
18:15:20 10 we had was the most significant area of
18:15:24 11 contamination that we knew of, and a tremendous
18:15:27 12 amount of effort has been put into that portion.

18:15:32 13 We have the closure report for the CST
18:15:33 14 facility within 2A, the limited soil removal at
18:15:36 15 the CST within Sub-Site 2A, the RFI Phase 1 under
18:15:43 16 RC/RA for SWMU 6, RFI Phase 2 sampling at SWMU 6,
18:15:48 17 the removal site evaluation for Sub-Site 2A. And
18:15:52 18 the removal action of 2A is all focused, so
18:15:55 19 two-thirds, roughly, of the investigations from
18:15:58 20 Mole pier have focused on the western end of 2A.

18:16:02 21 There have been some spotty sampling
18:16:05 22 activities for soil and groundwater at the rest of
18:16:08 23 the site, but those 15 acres really do need -- the
18:16:12 24 Navy has decided do need a comprehensive remedial
18:16:16 25 investigation performed to determine the nature

18:16:19 1 and extent of contamination and what level of
18:16:24 2 threat does that contamination represent.

18:16:29 3 The next steps: We have a predraft
18:16:36 4 work plan which is currently completing Navy
18:16:39 5 review and revision process. We will incorporate
18:16:43 6 the Navy's final comments and develop a draft work
18:16:48 7 plan and get that draft work plan to the agencies,
18:16:50 8 to the RAB, and to the public here within the next
18:16:55 9 couple month period.

18:16:57 10 We'll have that out for a 60-day
18:16:59 11 comment period, take public comments, comments
18:17:03 12 from RAB members, and comments from our regulatory
18:17:08 13 partners, revise and finalize the work plan,
18:17:13 14 conduct the RI. The purpose of the remedial
18:17:15 15 investigation for the overall Site 2 will be to
18:17:19 16 complete the definition of nature and extent of
18:17:20 17 contamination in soil for the remainder of Site 2,
18:17:27 18 not including Sub-Site 2A for soil and to evaluate
18:17:31 19 the nature and extent of contamination in
18:17:32 20 groundwater for all of Site 2 including Sub-Site
18:17:36 21 2A. Take that data, conduct risk assessment for
18:17:44 22 both human health purposes and a screening level,
18:17:45 23 ecological risk assessment, and based on the data
18:17:51 24 and results of the risk assessments, prepare a
18:17:52 25 remedial investigation report.

18:17:58 1 For soil delineation we plan to
18:18:00 2 install borings across Site 2 to include all
18:18:08 3 subsites except 2A which has been, again,
18:18:11 4 primarily excavated with perimeter samples showing
18:18:17 5 that the primary goals of the removal action were
18:18:19 6 completed. Where they didn't in the main
18:18:22 7 excavation, they went out and targeted hot spots
18:18:24 8 in the remaining portion of Site 2, Sub-Site 2A to
18:18:29 9 complete the information, and having a fairly
18:18:35 10 dense amount of data within the remaining soil
18:18:43 11 from their characterization samples to give us a
18:18:45 12 good handle on what is left in place at 2A.

18:18:50 13 So for the remedial investigation, use
18:18:53 14 that data from 2A with the data that we plan to
18:18:57 15 collect at the rest of the sub-sites.

18:18:59 16 Collect samples at multiple depths,
18:19:02 17 zero to two feet, eight feet to ten feet, and
18:19:05 18 targeted deeper locations based on information we
18:19:09 19 have from the removal action at 2A and previous
18:19:14 20 investigations where detections were identified
18:19:18 21 greater than 10 feet, analyze those samples for
18:19:21 22 complete suite of analytes.

18:19:24 23 Again, our rationale is to define the
18:19:24 24 nature and extent with sufficient soil samples
18:19:31 25 across the entire site while allowing sufficient

18:19:31 1 flexibility to make sub-site by sub-site

18:19:36 2 individual decisions if necessary.

18:19:39 3 To delineate groundwater, we plan to

18:19:44 4 use the nine existing shallow wells on-site,

18:19:48 5 augment that with a number of additional shallow

18:19:52 6 monitoring wells to give us a good understanding

18:19:55 7 of nature and extent of shallow groundwater. Also

18:19:58 8 install deep wells to assess the potential for

18:20:04 9 groundwater contaminants to have basically gone to

18:20:08 10 depths greater than 30 to 35 feet to examine the

18:20:12 11 groundwater deeper but to see if there have been

18:20:16 12 any DNAPLs or any chlorinated solvents or other

18:20:19 13 groundwater contaminants that have a tendency to

18:20:22 14 sink in the water column; perform multiple rounds

18:20:24 15 of groundwater sampling; conduct a 25-hour "Tidal

18:20:28 16 Influence Study" to give us some understanding of

18:20:35 17 the dynamic between San Diego Bay and groundwater

18:20:39 18 at the site.

18:20:41 19 Those objectives, again, are to

18:20:42 20 delineate horizontal and vertical extent of

18:20:43 21 contamination in groundwater; assess potential

18:20:46 22 communication in the dynamics of hydraulics with

18:20:54 23 bay water during tidal change; assess groundwater

18:20:59 24 conditions along the quay wall along 7th Street,

18:21:03 25 which is the primary potential point of contact

18:21:09 1 between any contaminated groundwater at the site
18:21:12 2 and ecological receptors; and evaluate groundwater
18:21:15 3 condition stability.

18:21:19 4 Our site and our proposed network of
18:21:24 5 monitoring wells are still completing numbers and
18:21:28 6 locations with the Navy, but essentially
18:21:31 7 establishing multiple series of wells along 7th
18:21:41 8 Street, a series of wells along the perimeter of
18:21:46 9 the site, and a series of wells within the site
18:21:52 10 within each one of the sub-sites to give us a
18:21:56 11 "broad" understanding of the site as well as an
18:22:01 12 understanding of specific potential groundwater
18:22:06 13 conditions within each of the sub-sites.

18:22:11 14 I'd be happy to entertain any
18:22:13 15 questions at this time.

18:22:18 16 MR. BISHOP: What tides are you looking at?
18:22:22 17 The highest high tide?

18:22:24 18 MR. STANG: I think our intent would be to
18:22:26 19 look at the spring tides, to look at the high
18:22:29 20 highs and the low lows on either the full moon or
18:22:32 21 a new moon, and look at what the maximum tidal
18:22:36 22 influence would be on the wells that we would
18:22:43 23 install within 10s of feet of the quay wall
18:22:48 24 itself, and the intent would be to look at
18:22:50 25 multiple depths, not only shallow groundwater but

18:22:57 1 deeper groundwater as well where there may be
18:22:59 2 potential pathways either through the quay wall or
18:23:07 3 underneath the quay wall. That would give us a
18:23:09 4 handle, I think, on both vertical and horizontal
18:23:11 5 delineation. It will give us an understanding of
18:23:15 6 where the path of least resistance or the
18:23:19 7 preferred pathways, if any, may be located, and we
18:23:22 8 can use that data on the maximum tidal swing to
18:23:30 9 average over that 25-hour and give us for the
18:23:33 10 entire site a good understanding of the net mean
18:23:39 11 groundwater gradient which in theory and generally
18:23:45 12 in practice should be quite similar to if we went
18:23:48 13 out there on the neapest of neap tides when tidal
18:23:52 14 change was smallest.

18:24:01 15 MS. MCINTYRE: I haven't been here for a
18:24:01 16 while, but I remember the Mole pier. And how big
18:24:03 17 is the entire site?

18:24:06 18 MR. STANG: Mole pier itself --

18:24:08 19 MS. MCINTYRE: I'm not talking about Mole
18:24:08 20 pier. The whole --

18:24:10 21 MR. STANG: 23 acres. The triangular area,
18:24:10 22 the RI site is approximately 23 acres.

18:24:16 23 MS. MCINTYRE: So the Site 2A is the only
18:24:19 24 site that's been really completely evaluated and
18:24:24 25 closed now?

18:24:25 1 MR. STANG: It hasn't been closed yet, but
18:24:27 2 it is certainly the portion of Site 2 that has had
18:24:31 3 the greatest sampling density for soil and
18:24:37 4 certainly the greatest effort to perform the
18:24:42 5 removal action to remove the contaminated soil, to
18:24:45 6 remove a couple feet of the upper portion of the
18:24:48 7 impacted groundwater.

18:24:50 8 As Glenn had mentioned earlier, the
18:24:53 9 excavation has gone down where they found the
18:24:57 10 diesel free product, some as deep as I believe
18:25:01 11 four to five feet into groundwater. So 2A has
18:25:10 12 been -- for all intents and purposes, I believe
18:25:13 13 about 80 percent of 2A down to about 11 or 12 feet
18:25:17 14 has been removed. It is gone. What's left
18:25:22 15 through characterization of sidewall samples, as
18:25:26 16 well as some grid sampling that was performed to
18:25:30 17 identify the hot spots that Glenn mentioned I
18:25:32 18 think in Phases 5, 6 and 7, give us a good handle
18:25:39 19 that those hot spot removal actions in the eastern
18:25:42 20 part of 2A accomplished the goal of getting rid of
18:25:46 21 those hot spots.

18:25:49 22 MS. MORLEY: Also at Sub-Site 2G there was
18:25:51 23 a removal action. You guys probably remember
18:25:53 24 Foster/Wheeler -- they were called Baxter then --
18:25:56 25 they did the thermal treatment where they had

18:25:59 1 treated the soil on site, and that was where Pete
18:26:02 2 was showing you the old ball fields, so that was
18:26:05 3 also described by Glenn.

18:26:09 4 MS. McINTYRE: Was that site always
18:26:10 5 Sub-Site 2A through G?

18:26:18 6 MS. MORLEY: I think that's when they
18:26:18 7 established 2G was when Foster/Wheeler was going
18:26:18 8 in to do their work because it was just so large.

18:26:23 9 MS. McINTYRE: Right. Thank you.

18:26:27 10 MR. STANG: Thank you very much.

18:26:29 11 MR. BISHOP: Thanks, Pete.

18:26:31 12 MS. MORLEY: I guess I'm up next to give an
18:26:32 13 update on the proposed plan for Sites 5, 7, 11,
18:26:37 14 and 12.

18:26:39 15 As you remember last time when our
18:26:41 16 story unfolded, DTSC had written the Navy a letter
18:26:43 17 stating that they basically didn't agree with no
18:26:49 18 further action. They wanted us to do further
18:26:49 19 groundwater sampling.

18:26:53 20 Well, even though we stand by our
18:26:56 21 contention that the site doesn't need it, because
18:26:58 22 we're such nice people and get along so well with
18:27:02 23 DTSC, we're going to say okay. So we sent them a
18:27:03 24 letter -- two letters, actually, basically coming
18:27:06 25 up with our proposal for groundwater sampling at

18:27:10 1 the site, and now we're just waiting to hear back
18:27:13 2 what they think of our proposal. So the next time
18:27:15 3 we meet we should have more information; right,
18:27:18 4 Douglas?

18:27:19 5 MR. BAUTISTA: Yes. Thank you.

18:27:22 6 MS. MORLEY: You're welcome. Especially
18:27:23 7 that part about us being nice; right, Douglas?

18:27:28 8 And that's the update on the proposed
18:27:32 9 plan.

18:27:36 10 Tim is not Carol Yamane.

18:27:40 11 MR. HEIRONIMUS: I am not Carol Yamane.

18:27:40 12 MS. MORLEY: This is Tim Heironimus, and he
18:27:40 13 is going to talk about IR Site 3.

18:27:44 14 MR. HEIRONIMUS: Thanks, Theresa.

18:27:46 15 MS. MORLEY: You're welcome, Tim.

18:27:47 16 MR. HEIRONIMUS: Those who may not know me,
18:27:50 17 I am Tim Heironimus. I'm the project manager with
18:27:52 18 Bechtel on Naval Station, and I'm filling in for
18:27:57 19 Carol who couldn't be here tonight.

18:27:59 20 Before I get started with the
18:28:02 21 discussion that I have here, I just wanted to
18:28:05 22 mention a couple of things. First of all, this is
18:28:08 23 the first of two presentations that you'll see on
18:28:10 24 Site 3 tonight. The second is going to be given
18:28:14 25 by Dave Murchison with DTSC, and they will be

18:28:19 1 providing DTSC's perspective on Site 3.

18:28:24 2 This project has been stalled out
18:28:29 3 until recently. What we want to do now is get it
18:28:33 4 back on track, get things moving, so that's really
18:28:39 5 the purpose of trying to get together again and
18:28:44 6 decide on what the next steps ought to be on
18:28:46 7 Site 3.

18:28:48 8 The second thing I wanted to mention
18:28:50 9 before I get started is just basically a summary
18:28:55 10 of where we are right now in a nutshell.

18:28:59 11 In 2000 the Navy submitted a prefinal
18:29:03 12 remedial investigation report for Site 3, and that
18:29:10 13 report was submitted to the regulators and to the
18:29:13 14 RAB. We did receive comments back from DTSC who
18:29:19 15 primarily had the most significant comments on the
18:29:23 16 document, and the Navy prepared responses to those
18:29:26 17 comments and provided those back to DTSC. And we
18:29:33 18 have sort of a back and forth discussion on paper
18:29:37 19 here with DTSC, but DTSC then provided back their
18:29:43 20 responses to their comments, if you will, and we
18:29:50 21 have had those for a while.

18:29:52 22 The Navy has recently submitted back
18:29:55 23 responses for more discussion on that, so there's
18:30:00 24 a paper trail here of comments and responses that
18:30:04 25 we have gone through.

18:30:05 1 Where it stands right now is we're at
18:30:07 2 the point where we want to sit down again with
18:30:10 3 DTSC and negotiate what we need to do to complete
18:30:16 4 this RI report and move Site 3 along.

18:30:21 5 One more note. The Site 3 remedial
18:30:26 6 investigation report when it was prepared
18:30:29 7 essentially focused more on soil, if you will. We
18:30:34 8 included a baseline human health risk assessment
18:30:37 9 for soil in that document, and we conducted the
18:30:42 10 risk assessment using a residential scenario and
18:30:46 11 industrial scenario, so both of those are in
18:30:48 12 there.

18:30:49 13 The risk basically came up for
18:30:51 14 residential use would have come up in the higher
18:30:55 15 end of what we call the risk management range.
18:30:58 16 Some of you probably already heard of that before,
18:31:01 17 but it's EPA's designation for what would be
18:31:07 18 considered acceptable risk, which are risks
18:31:10 19 greater than one in a million of contracting
18:31:14 20 cancer.

18:31:15 21 At the other end of that range are
18:31:17 22 risks that would be considered unacceptable, which
18:31:18 23 are risks that are 1 in 10,000, and that's usually
18:31:24 24 denoted in scientific notation by 10 to the minus
18:31:29 25 4, which is one in 10,000, and 10 to the minus 6

18:31:31 1 or 1 in a million.

18:31:34 2 So the risks were toward the 10 to the
18:31:36 3 minus 4 range for residential; whereas, for an
18:31:41 4 industrial scenario, similar to why it's being
18:31:44 5 used right now, risks are at the other end of the
18:31:46 6 spectrum which are more 10 to the minus 5 or one
18:31:50 7 in a hundred thousand.

18:31:52 8 The report also acknowledged that
18:31:58 9 additional groundwater evaluation was needed at
18:32:01 10 the site, so that's certainly in that report and
18:32:05 11 set the stage for the next step.

18:32:08 12 So with that, I think I'll go ahead
18:32:15 13 and get started. Dave I think is going to hit
18:32:15 14 quite a bit of the site history and some of the
18:32:17 15 concerns that DTSC have, so I'll probably try and
18:32:23 16 make mine a little more brief 'cause I know that
18:32:26 17 some of that is going to be covered in our
18:32:30 18 discussion.

18:32:30 19 MR. MURCHISON: Don't worry, Tim. I'm
18:32:30 20 going to be brief, too.

18:32:32 21 MR. HEIRONIMUS: Sounds good.

18:32:35 22 You can see Site 3 is right in the
18:32:46 23 vicinity there at Paleta Creek. An enlargement of
18:32:53 24 Site 3, sort of a slightly rectangular site.

18:33:01 25 One thing I want to point out here is

18:33:03 1 a fence line that's existing right now. That
18:33:07 2 defines the northern part of the site from the
18:33:10 3 southern portion of the site, and that's fairly
18:33:15 4 significant in the way we evaluate the risk and
18:33:20 5 have down various investigations. And as I
18:33:20 6 mentioned, there's been some soil removal actions
18:33:25 7 down there that focused primarily in the southern
18:33:29 8 part.

18:33:30 9 Site 3 operated from 1943 to 1975, and
18:33:35 10 it was the Navy's recycling center and area for
18:33:41 11 handling hazardous waste materials. There were
18:33:47 12 two incinerators located here that were used for
18:33:50 13 burning of all the wastes that weren't recycled or
18:33:55 14 otherwise reused. There was also another
18:33:59 15 incinerator located in about that area. That was
18:34:02 16 reportedly used for burning classified
18:34:05 17 documents -- papers and such.

18:34:07 18 Also, a couple of things to note here:
18:34:11 19 There were three USTs on this northern part of the
18:34:14 20 property, and the site itself was used for waste
18:34:21 21 storage, and they would keep materials stored at
18:34:24 22 the surface in drums and so on.

18:34:28 23 Here's the current use of Site 3.
18:34:33 24 This is up on the northern part, and for those of
18:34:36 25 you fairly familiar with it, this is the PWC

18:34:39 1 security parking lot, and the maintenance building
18:34:43 2 is off the screen and would be off in this
18:34:43 3 direction. This is, I believe, a natural gas
18:34:48 4 fueling station.

18:34:50 5 This is the southern two-thirds, so
18:34:52 6 it's this area here, and it is used as a parking
18:34:59 7 lot for the fleet while they're at duty.

18:35:05 8 What I mainly want to focus in on here
18:35:11 9 from the Navy's perspective, we have done a lot of
18:35:14 10 work at this site. We have made progress on it,
18:35:17 11 despite the fact that it's taken us quite some
18:35:22 12 time to get where we are right now. And I'll just
18:35:27 13 not focus on the site investigation so much, but
18:35:34 14 maybe address a few of the removal actions.

18:35:35 15 Just to mention these, 1986 was the
18:35:41 16 first time the site was even evaluated. This was
18:35:44 17 an initial assessment study, a paper study
18:35:47 18 essentially, that identified the need for further
18:35:51 19 work.

18:35:52 20 In 1986 there was a soil and
18:35:54 21 groundwater assessment done by Latten &
18:35:57 22 Associates, I believe. And in 1988 there was a
18:36:06 23 verification step investigation, which was the
18:36:11 24 next step that you take in a CERCLA process to
18:36:16 25 investigate sites to get a better gauge on whether

18:36:19 1 it's of concern or not.

18:36:24 2 A 1992 site assessment and a
18:36:28 3 geotechnical study for citing -- one time the Navy
18:36:33 4 wanted to cite a cold storage facility on the
18:36:36 5 property but they didn't follow through with that.

18:36:40 6 And I don't believe this is correct,
18:36:42 7 but in 1992 there was additional site
18:36:48 8 investigation work, site inspection work done by
18:36:51 9 IT Corporation. This 1994 soil assessment is
18:36:56 10 basically an underground storage tank removal
18:36:58 11 investigation; and a removal site evaluation
18:37:05 12 performed by OHM which later became IT, and that
18:37:11 13 was in preparation for a soil removal action down
18:37:16 14 here on this southern two-thirds.

18:37:17 15 There you can see the tally of the
18:37:17 16 number of samples that were collected for these
18:37:24 17 investigations. Just 430 samples were collected
18:37:27 18 during the time critical removal action which was
18:37:31 19 this area here.

18:37:34 20 Just to explain this a little bit,
18:37:35 21 this shows the boundaries of soil removed -- they
18:37:42 22 are located in three areas here: this is Area 1,
18:37:44 23 Area 2, and Area 3. And after that removal action
18:37:50 24 was completed, the site was backfilled and
18:37:54 25 restored to its parking lot surface. There was

18:37:58 1 additional soil samples collected, approximately
18:38:02 2 80 borings and soil samples put into this area
18:38:08 3 here, and we had 27 soil samples also collected up
18:38:16 4 in this northern area under a work plan that was
18:38:22 5 prepared and approved by the regulatory agencies.

18:38:25 6 Now, the work that we've accomplished
18:38:28 7 for the soil removal, starting off there was a
18:38:34 8 soil removal action done for about eight inches of
18:38:39 9 soil over 150 by 150 foot square area, but there's
18:38:44 10 really no documentation for where that occurred.
18:38:50 11 We know it occurred at Site 3, but that's about
18:38:51 12 all we know. It probably occurred up in the
18:38:55 13 incinerator area, but I don't know.

18:38:58 14 Again, the underground storage tanks
18:39:03 15 were removed. This particular tank was found to
18:39:07 16 have leaked and contaminated soil with diesel, so
18:39:10 17 there was 180 cubic yards of diesel contaminated
18:39:15 18 soil removed from that area.

18:39:18 19 And before I move on to the main time
18:39:23 20 critical removal action, there was what we call a
18:39:25 21 post time critical removal action. That was a
18:39:31 22 small area located right here where some
18:39:35 23 contaminated soil was moved out of a 10 foot by 10
18:39:37 24 foot area.

18:39:39 25 This is the time critical removal

18:39:45 1 action. Again, you see the boundaries. The grids
18:39:48 2 depict the depth of soil excavation with the
18:39:54 3 colors -- our color key here -- but I believe the
18:39:59 4 deepest soils removed were down to about 10 to 12
18:40:05 5 feet, and most areas more like six to eight feet.
18:40:09 6 The deeper areas -- well, it varies, but there was
18:40:12 7 a strip along here and several others.

18:40:18 8 This was a time critical removal
18:40:18 9 action. It was not intended to be a final
18:40:23 10 remedial action, so it was done as a fast track
18:40:29 11 process. And in doing that, the lead and PCBs or
18:40:34 12 polychlorinated biphenyls were determined to be
18:40:39 13 the primary chemicals of concern for the removal
18:40:42 14 action, and there were target cleanup levels set
18:40:47 15 for those contaminants. Basically those were set
18:40:50 16 at what's known as the PRGs or the preliminary
18:40:52 17 remediation goals that EPA identifies for
18:40:58 18 chemicals on a health based risk basis.

18:41:02 19 Just one last thing: both of those
18:41:07 20 contaminants are not very mobile. Something to
18:41:12 21 note there.

18:41:16 22 Now, for groundwater, again, I go back
18:41:23 23 to what I said earlier. There is a need to do
18:41:26 24 some additional groundwater evaluation, but we do
18:41:31 25 have some groundwater information from the site,

18:41:34 1 either from former wells or existing wells that
18:41:39 2 were put in after the time critical removal
18:41:42 3 action. You can see the color key where these
18:41:42 4 former wells were located. A number of those had
18:41:49 5 to be removed during the removal action, and OHM
18:41:52 6 subsequently reinstalled these new wells right
18:41:59 7 here.

18:41:59 8 In addition to that, there were
18:41:59 9 hydropunch samples collected at these blue dots.
18:42:02 10 These are basically grab groundwater samples that
18:42:05 11 are collected while drilling.

18:42:11 12 And the overall groundwater gradient
18:42:15 13 is actually towards the north, which is a little
18:42:19 14 curious right now, and I think we need to know
18:42:21 15 more about what that entails and why that is.

18:42:28 16 Just to touch upon a couple of points
18:42:32 17 back to the prefinal remedial investigation in
18:42:38 18 that report, we did develop that confirmation
18:42:41 19 sampling strategy after the time critical removal
18:42:42 20 action. That was done jointly with an approved
18:42:48 21 work plan. When we prepared the RI report again
18:42:53 22 and focused on the soil, primarily the results of
18:42:58 23 the post time critical removal action sampling,
18:43:00 24 and why that's significant is that during the time
18:43:03 25 critical removal action, the samples that were

18:43:05 1 collected again were collected for lead and PCBs,
18:43:10 2 so there was not data for an entire spectrum of
18:43:15 3 possible chemicals that were out at the site. So
18:43:17 4 there was a definite need to go back there to the
18:43:21 5 site and get additional data that filled in more
18:43:27 6 information on what the possible chemicals were of
18:43:30 7 concern remaining in the soil.

18:43:32 8 Again, we separated the site into two
18:43:36 9 areas, north and south. We carried that through
18:43:39 10 with the risk assessment, so the risk assessment
18:43:40 11 calculates risk for the north area and for the
18:43:44 12 south area.

18:43:47 13 Again, just to touch on that, we have
18:43:50 14 been going through a process here where we're
18:43:53 15 trying to work through what everyone's needs will
18:43:57 16 be on this project. Hopefully, what we want to do
18:44:01 17 here is team up with DTSC and sit down and develop
18:44:06 18 a joint strategy where we're all comfortable with
18:44:08 19 the data that we collect will be sufficient to
18:44:12 20 complete the RI, so that's really the goal of what
18:44:16 21 we want to do as the next step.

18:44:18 22 Now, we have this slide up here.
18:44:24 23 Obviously, the most important one I think is the
18:44:27 24 exact scope. The soil and groundwater will be
18:44:29 25 presented in the work plan. We probably have some

18:44:34 1 differences of opinion on these two, but it's

18:44:36 2 nothing we can't come to an agreement on.

18:44:40 3 And, hopefully, if we sit down and set

18:44:46 4 some timelines for ourselves, we do have this most

18:44:51 5 recent set of DTSC comments on the responses we

18:44:55 6 sent. However, I think what would be most

18:44:57 7 fruitful now is to actually have a face-to-face

18:45:04 8 meeting and iron these issues out.

18:45:04 9 And we're hoping we can do that in

18:45:08 10 February next month here and get geared up to

18:45:13 11 prepare what we're calling an extended remedial

18:45:15 12 investigation work plan. Again, the focus there

18:45:19 13 is let's fill in these additional data needs and

18:45:23 14 get the dataset that everyone feels comfortable

18:45:26 15 with.

18:45:27 16 We targeted that for July for the

18:45:31 17 draft to come out for the RAB and the agencies for

18:45:36 18 their review again. Hopefully, we'll be in the

18:45:40 19 field in the fall, and the extended remedial

18:45:44 20 investigation report would be in next year's time

18:45:49 21 frame there in the summer and fall.

18:45:52 22 That's all I have. If anyone has any

18:45:55 23 questions, I'll be happy to try and answer those.

18:46:01 24 MR. BISHOP: Thanks.

18:46:04 25 MS. MORLEY: Dave, you're up.

18:46:07 1 MR. MURCHISON: All righty.

18:46:20 2 Just to introduce myself, I'm Dave

18:46:24 3 Murchison. I've been with DTSC a couple of years

18:46:30 4 now. I have been a professional geologist quite

18:46:34 5 some time doing oil patchwork, research work with

18:46:39 6 the ocean drilling program, working at the United

18:46:42 7 States Department of Energy, working for

18:46:46 8 environmental consulting companies like

18:46:47 9 Groundwater Technology and Ridell Environmental

18:46:51 10 Services. I've been in my own practice for, oh,

18:46:57 11 nine years or something like that before coming to

18:47:00 12 DTSC.

18:47:02 13 What my job is is to do the geological

18:47:10 14 evaluation of work that is designed to protect

18:47:15 15 human health and the environment. No part of my

18:47:20 16 job description says that I'm to be a road block,

18:47:23 17 and we do strive to avoid that perception.

18:47:33 18 Now, going through this little

18:47:39 19 presentation, when you see red type, you're seeing

18:47:46 20 something that worried me as I reviewed the

18:47:50 21 documents that go into this site.

18:47:55 22 So, anyway, the first question that

18:48:01 23 DTSC geologists have to ask about a site is what

18:48:07 24 was it that happened here. What materials were

18:48:11 25 used, how were they used, what was the intention

18:48:13 1 of the work, what were the rules in place while
18:48:19 2 the work was being done, and how would those
18:48:23 3 contaminants behave in this place. All right?

18:48:29 4 Now, the information we have is this:
18:48:35 5 Site 3 received a wide variety of materials from
18:48:40 6 several Naval stations and the fleet. It included
18:48:51 7 solvents, batteries containing battery acid, a
18:48:54 8 wide variety of metals, a wide variety of
18:48:59 9 petroleum base compounds -- PCBs, so on.

18:49:05 10 What rules were in place? Essentially
18:49:08 11 none. The environmental rules that were in place
18:49:13 12 when this place started up in 1943 were
18:49:16 13 essentially this: you may not put anything in San
18:49:16 14 Diego Bay that impedes navigation. So the rules
18:49:25 15 were not as tough then as they are now.

18:49:32 16 So here's what we know. There's stuff
18:49:42 17 from the petroleum family including lubricants,
18:49:47 18 fuels, a fairly wild range of things. There's
18:49:52 19 transformers that came in. Well, those
18:49:53 20 transformers contained transformer oil which
18:49:53 21 probably contained PCBs. Other equipment came in
18:50:03 22 containing -- we don't know what it was. There
18:50:05 23 could have been antifreeze -- exotic stuff. It's
18:50:12 24 hard to know.

18:50:16 25 Then metals -- there's a fairly wide

18:50:19 1 array of metals that we routinely test for, and
18:50:23 2 there's been a good deal of metal testing at the
18:50:25 3 site. The stuff that's worrisome tends to be
18:50:27 4 things like lead and copper and mercury.

18:50:34 5 Now, you can see there's some other
18:50:38 6 stuff -- medical waste. I'm a geologist. I don't
18:50:38 7 worry about medical waste. But here's the deal.
18:50:44 8 Stuff was poured on the ground, stuff was stored
18:50:51 9 in leaking drums. A previous person in my job did
18:50:57 10 some calculations that come out with numbers that
18:51:00 11 are scary about how much stuff might have been
18:51:02 12 discharged to the ground and to the bay at this
18:51:06 13 site.

18:51:09 14 If you look at how this stuff works
18:51:11 15 together -- if battery acid is spilled on the
18:51:14 16 ground, it contains dissolved lead if it's a lead
18:51:18 17 acid battery. It may contain other metals that
18:51:22 18 come from the battery, but there's also scrap
18:51:24 19 metal on and in the ground, and so essentially any
18:51:28 20 metal that is present at Site 3 can be dissolved
18:51:31 21 in battery acid and carried down toward
18:51:34 22 groundwater.

18:51:37 23 So the question is how deep is
18:51:39 24 groundwater? It's ten feet. It doesn't take a
18:51:44 25 lot of spillage to get toxic metals all the way

18:51:49 1 down to groundwater at 10 to 12 feet below grade.
18:51:54 2 Similarly, there are solvents here -- chlorinated
18:51:57 3 and unchlorinated solvents that can dissolve
18:52:01 4 things like PCBs, that can add mix with things
18:52:07 5 like members of the petroleum family and carry
18:52:10 6 those things down to groundwater.

18:52:22 7 So groundwater is about ten feet below
18:52:24 8 the surface. As Tim said, the gradient is to the
18:52:25 9 north and northeast. The soils, it's largely
18:52:34 10 hydraulic fill which can be anything from sand
18:52:39 11 that moves contaminants pretty easily to clay that
18:52:42 12 doesn't move them hardly at all. Shell fragments
18:52:46 13 are common. That says to me that the source is
18:52:49 14 marine. It's stuff from the bay that has
18:52:53 15 typically been found so far in terms of the soil
18:52:57 16 at the site.

18:52:59 17 Field geologists always look at the
18:53:01 18 notes from the field, and there were a good many
18:53:04 19 cases where the field geologists reported chemical
18:53:06 20 and sewage odors as the geologists worked. Well,
18:53:13 21 the geologists were smelling something, so that's
18:53:17 22 just an additional indication that I look at, that
18:53:22 23 I worry about a little bit.

18:53:24 24 Same timeline as Tim showed you
18:53:32 25 essentially with my little red marks. PCB testing

18:53:36 1 in a small area, the data's lost. Okay. Well,
18:53:43 2 I'm not too worried about that. I'm disappointed
18:53:46 3 in that. Then there was geotechnical work that
18:53:51 4 found PCB, cadmium, copper, lead, and arsenic.
18:53:53 5 Those are all bad things to find, and the soil
18:53:58 6 sampling was limited to five feet. Well,
18:54:03 7 groundwater's at ten, so I worry about that
18:54:08 8 difference between the five feet and the ten.
18:54:13 9 '86 additional assessment; '87
18:54:13 10 verification.
18:54:17 11 Site inspection resampled three wells
18:54:28 12 that had been put in before, found -- now this is
18:54:31 13 all jargon -- 1,1 DCA is 1,1 dichloroethane which
18:54:34 14 is a chlorinated solvent that is not terribly
18:54:40 15 soluble in water. Yet, when it hits water, it
18:54:41 16 sinks, and it can carry along other materials that
18:54:47 17 are dissolved in it.
18:54:49 18 1,1 DCE is 1,1 dichloroethene which is
18:54:51 19 a similar chlorinated solvent. Both of these can
18:54:59 20 be present because other solvents are breaking
18:55:02 21 down in the subsurface. I don't know what's going
18:55:10 22 on there exactly, but those things are present and
18:55:13 23 those worry me.
18:55:16 24 CS₂, carbon disulfide, that is a
18:55:19 25 clear, heavy, sweet-smelling solvent that's used

18:55:24 1 in a lot of plastics work, rubber work, various
18:55:29 2 odds and ends. It's not used for cleaning parts
18:55:35 3 like these two are, so this is from some different
18:55:39 4 source. Now, carbon disulfide will dissolve just
18:55:44 5 about anything organic and carry it along with it.
18:55:47 6 It will dissolve metals like potassium -- the
18:55:52 7 lighter metals, and it's about one-half of one
18:55:59 8 percent soluble in water, which means it's much
18:56:03 9 more soluble than these things, but still not very
18:56:07 10 soluble. It's heavier than water, which means
18:56:10 11 it's going to sink. So if a lot of -- and we
18:56:13 12 don't know -- but if a lot of this was released at
18:56:14 13 the site, it could have carried a good deal of
18:56:20 14 material down with it into groundwater and then
18:56:25 15 gradually dissolved away and be gone and so on.
18:56:28 16 Now, I understand that I'm sort of
18:56:30 17 saying this is sounding a little like the argument
18:56:34 18 that I as raised by a tribe of invisible Indians
18:56:36 19 and my proof is that they've let no trace. I'm
18:56:43 20 just nervous about the fact that this stuff is
18:56:46 21 there. And if it's there, it can be a bad actor,
18:56:48 22 particularly with respect to moving other
18:56:51 23 contaminants around.
18:56:56 24 '93 soil assessment. That's the thing
18:56:56 25 up in the northern section where there has not

18:57:06 1 been too much work they removed some USTs. The
18:57:12 2 county supervised it during the closure of the
18:57:13 3 tanks, and they were mainly interested in the
18:57:20 4 diesel tank, to there wasn't a lot of testing for
18:57:24 5 other things that I'm worried about at the site,
18:57:26 6 the contaminants -- the toxic contaminants.

18:57:30 7 Removal site evaluation -- I should
18:57:38 8 have made this red -- again, this removal site
18:57:42 9 evaluation depth of investigation is five feet.
18:57:45 10 Groundwater is at ten. And they're testing for
18:57:54 11 things that they should be worried about but
18:57:57 12 they're not going to groundwater or past the
18:58:01 13 groundwater surface.

18:58:04 14 Then the removal action. 22,000 cubic
18:58:13 15 yards of soil -- you can read this. It was a fair
18:58:16 16 amount of stuff that was removed.

18:58:22 17 430 confirmation samples were taken
18:58:25 18 and analyzed for lead and PCB. Now, this is a
18:58:29 19 little bit tragic. 430 samples were analyzed.
18:58:31 20 Only 63 could be mapped. We only know now,
18:58:37 21 apparently, where 63 of those were. That means
18:58:40 22 367 of them are of no use to me in figuring out
18:58:52 23 what contamination there was at the site, where it
18:58:54 24 was, what its distribution was -- you know, was
18:58:58 25 the bad contamination all in one place, was it in

18:59:01 1 two places, was it in 12. Was it associated with
18:59:05 2 one building? One pit? What? The assertion that
18:59:13 3 there were 430 samples taken and analyzed seems to
18:59:16 4 be completely correct. I have no argument with
18:59:19 5 that. The samples that I can use are the 63 that
18:59:25 6 we know where they were taken.

18:59:35 7 Now, down here, removal not complete
18:59:35 8 under the pipelines. There's like a 16-inch water
18:59:36 9 main that goes across the site. It goes down
18:59:43 10 along here.

18:59:47 11 All those 60 some odd samples that are
18:59:51 12 available from the removal site evaluation --
18:59:55 13 excuse me -- from the removal action, all those
19:00:01 14 are along this particular trench. And when you
19:00:06 15 get down in this area, there were samples of soil
19:00:11 16 that were still in the ground that come back not
19:00:14 17 just toxic, but hazardous under California law.
19:00:20 18 That means they're pretty bad soil samples, and
19:00:23 19 they represent soil that's still in place.

19:00:26 20 Now, a lot of soil was removed here,
19:00:30 21 but there's a lot left that hasn't been either
19:00:34 22 removed or really investigated.

19:00:38 23 This color key goes with these things.
19:00:41 24 This blue on here like there and there and there
19:00:45 25 and there, that represents places where only two

19:00:47 1 to four feet of soil was removed, leaving six to
19:00:51 2 eight feet between there and groundwater and so
19:00:56 3 on. The yellow, which didn't come through very
19:00:57 4 well at all in this scan, but I assure you there
19:01:04 5 are some yellow squares on there, four to six
19:01:10 6 feet; red 8 to 10 feet; gray 10 to 12 feet.

19:01:23 7 So you do some calculations and you
19:01:25 8 figure out -- what my calculations are is that
19:01:31 9 about one-third of the soil at the site above
19:01:36 10 groundwater has been removed and replaced. Now,
19:01:39 11 that's progress. That's good. I don't object to
19:01:43 12 that. The problem is all of that expensive data
19:01:46 13 that I can't use is a real frustration.

19:01:50 14 Then remedial investigation followed
19:01:57 15 up on the removal, 55 borings -- the way I read
19:02:01 16 it, 55 boring locations, 80 soil samples. Maximum
19:02:01 17 depth of investigation eight and a half feet.
19:02:09 18 Again, we didn't get to the groundwater. We
19:02:11 19 didn't get to see any of the soil below the
19:02:14 20 groundwater entries. And there was some water
19:02:19 21 sampling, metals, gamma and beta. It did turn up
19:02:26 22 a little, I guess -- is this correct, Tim? There
19:02:27 23 was a little gamma beta that turned up in the
19:02:30 24 water samples?

19:02:33 25 MS. MORLEY: Yes.

19:02:37 1 MR. MURCHISON: And then also in '99 there
19:02:42 2 was a tidal influence study done, and essentially
19:02:43 3 what that did is it confirmed that some of the
19:02:48 4 groundwater at the site is in connection with
19:02:50 5 tidal water, which is either the bay or Paleta
19:02:55 6 Creek.

19:02:56 7 Here's what keeps me up at night. Not
19:03:01 8 so much that one. Tim pointed this out. The
19:03:08 9 removal action was really not intended as a way of
19:03:13 10 closing the site, and it's very inside baseball,
19:03:19 11 but it's something that DTSC worries about.

19:03:23 12 An action that is designed to close a
19:03:27 13 site can be very different from an action that's
19:03:29 14 just intended to get some nasty stuff out of the
19:03:32 15 ground quickly, and it's the second kind of
19:03:36 16 removal that we had.

19:03:38 17 The lab analysis that was done of soil
19:03:52 18 samples taken from the bottom of the excavation
19:03:55 19 was they were only analyzed for lead and PCB.
19:04:01 20 That is regrettable because we had a much longer
19:04:06 21 list of things that we knew we were worried about
19:04:08 22 at the site, but it was only lead and PCB that it
19:04:08 23 got analyzed for. So, again, we missed an
19:04:17 24 opportunity to make progress on the other
19:04:22 25 contaminants.

19:04:24 1 So after the removal action, we know
19:04:31 2 that there's contaminated soil in place below the
19:04:33 3 water main. We don't know how much it is. We do
19:04:36 4 know that some of it is bad soil. We can't figure
19:04:42 5 out -- I hope that this is four 9s so I won't tell
19:04:42 6 you again -- this is something I have talked about
19:04:51 7 before, but during the removal site evaluation
19:04:52 8 which is the study done just before the removal
19:04:56 9 action, a lot of the soil sampling was done by
19:04:59 10 methods that disturbed the soil and allowed it to
19:05:04 11 release volatiles, and so we can't rely all that
19:05:07 12 much on the volatile analytical that was done.

19:05:14 13 I don't mean to beat that to death,
19:05:27 14 but there were hazardous concentrations found out
19:05:29 15 there and we can't map them. The northern area
19:05:32 16 remained in use. That's the stuff north of the
19:05:36 17 fence that Tim talked about. It remained in use
19:05:39 18 much longer than the southern part, so there
19:05:42 19 hasn't been anywhere near as much investigation up
19:05:45 20 there.

19:05:46 21 We don't think it's adequately
19:05:46 22 investigated, and there's not enough information
19:05:55 23 on the deeper soil below the groundwater surface.
19:05:59 24 We had contaminants that are sinkers that go down
19:06:00 25 to groundwater and keep going. We had acids that

19:06:07 1 carry metals, and when those acids get to
19:06:11 2 groundwater, they can start to dilute and they
19:06:14 3 release toxic materials into the soil below the
19:06:19 4 groundwater interface. It's a very common thing.
19:06:24 5 And the other thing -- this is very
19:06:25 6 typical of environmental investigations at all
19:06:29 7 kinds of sites. When you have contamination in
19:06:32 8 soil and it's documented from the surface all the
19:06:35 9 way to the groundwater, it is very common for
19:06:40 10 agencies to want to confirm that that
19:06:43 11 contamination doesn't keep going in the soil below
19:06:45 12 groundwater.
19:06:49 13 In the earlier presentation we had
19:06:51 14 tonight about Site 2A you saw the pictures of an
19:06:56 15 excavation down to groundwater. They had a big
19:06:58 16 pond and there was this big plume of diesel fuel
19:07:04 17 coming up out of the water. That was
19:07:07 18 contamination below groundwater. You saw the
19:07:10 19 picture.
19:07:12 20 That's something that we're worried
19:07:14 21 about here at this site. It's an issue that has
19:07:21 22 come up between us and the Navy at Site 3 in years
19:07:27 23 before this. It's still an issue to us.
19:07:31 24 Paleta Creek. Site 4 is just east of
19:07:47 25 here across -- what's the boulevard called?

19:07:53 1 MS. MORLEY: Harbor.

19:07:53 2 MR. MURCHISON: Harbor Boulevard.

19:07:54 3 Groundwater -- the team is working on an

19:08:03 4 investigation over there that includes groundwater

19:08:05 5 work, and the gradient over there is towards the

19:08:08 6 boulevard. It's to the west. Here you cross the

19:08:15 7 railroad tracks, you cross the boulevard, and then

19:08:17 8 the gradient is almost the other way, which

19:08:21 9 suggests that there may be springs in the drainage

19:08:27 10 channels along the railroad tracks that are

19:08:29 11 allowing contaminated water to get out of both

19:08:32 12 sites into the drainage creek that goes straight

19:08:35 13 into Paleta Creek. That could be a serious

19:08:41 14 ecological risk, and it's something that we're

19:08:45 15 going to continue to be worried about.

19:08:48 16 And then there's this one. As I said

19:08:58 17 at the beginning, the stuff that we do in trying

19:09:03 18 to understand the site is to learn about what was

19:09:07 19 done there, what was used there, what processes

19:09:10 20 were there, and we really don't have a good handle

19:09:14 21 on that for this site. We have asked before for a

19:09:22 22 thorough search of the records of the Naval

19:09:23 23 Station concerning what buildings, what

19:09:23 24 facilities, what equipment was at this site, when

19:09:29 25 it was there, and to compare it with aerial and

19:09:34 1 site photo histories that might be able to be
19:09:36 2 assembled. That would allow everybody on the team
19:09:40 3 to understand "Okay. The bad actor was really the
19:09:45 4 crushing machine over the pit over there. That
19:09:49 5 was where most of the contamination got into the
19:09:49 6 ground." We don't even know where the crushing
19:09:55 7 machine over the pit was at this site other than
19:09:59 8 we have one reference saying there was such a
19:10:01 9 thing. That's just one example.

19:10:04 10 We don't know where old drums
19:10:09 11 containing stuff were stored between 1950 and 1955
19:10:15 12 or between 1955 and 1960, and we would really like
19:10:21 13 to know that so that we can help direct where to
19:10:25 14 look for things because we, too, do not wish to
19:10:29 15 drag this out, and we don't wish to say go out
19:10:31 16 there and drill a thousand more holes, okay, and
19:10:38 17 take 5,000 more soil samples. That's not what we
19:10:39 18 want.

19:10:41 19 We want the information to understand
19:10:44 20 the site, to confirm what we hope, that soil below
19:10:51 21 groundwater is clean enough to leave in place; do
19:10:58 22 the groundwater work that is being proposed, and
19:11:04 23 make some progress for real closure of this site.

19:11:12 24 This is bureaucratic, but there are
19:11:18 25 lost groundwater wells out there. Those are a bad

19:11:21 1 thing. They can be conduits for bad stuff to

19:11:25 2 continue to migrate.

19:11:28 3 And I have no particular evidence of

19:11:31 4 this, but as I said earlier, there were

19:11:36 5 essentially no rules about what to do with things

19:11:42 6 that were thrown away back in the '40s and '50s,

19:11:44 7 and I worry that Paleta Creek might have been a

19:11:50 8 useful place to pour things under the rules at

19:11:54 9 that time, so that's an issue that I'm concerned

19:11:58 10 with.

19:12:00 11 I tried to be quick. Are there any

19:12:02 12 questions?

19:12:04 13 MS. COLLINS: Just a point of historical

19:12:06 14 reference. The Site 3 interim removal action was

19:12:10 15 an interim removal action, but it was done

19:12:13 16 addressing what is now a hot button for EPA

19:12:17 17 environmental indicators, which there are two

19:12:20 18 categories: one is human health exposure and the

19:12:20 19 other is groundwater impact.

19:12:24 20 And the surface -- Site 3 was a

19:12:26 21 parking lot and there were cracks in it and little

19:12:29 22 bumps in it, and there was a concern by the Navy

19:12:30 23 that there might be a potential for a pathway

19:12:35 24 there, so the Navy was acting kind of preemptively

19:12:38 25 to avoid that pathway and protect the public.

19:12:43 1 MR. MURCHISON: Please understand I'm
19:12:44 2 not -- the last thing I'm trying to do is assess
19:12:49 3 blame. I'm trying to tell you what my remaining
19:12:50 4 concerns are.

19:13:10 5 MR. BISHOP: No questions here.

19:13:11 6 That was very thorough. Thank you.

19:13:13 7 MR. MURCHISON: Thanks for your attention.

19:13:13 8 MR. BISHOP: Karen, you're next.

19:13:37 9 MS. COLLINS: My presentation is mostly in
19:13:37 10 power point, but I have a couple of moving clip
19:13:41 11 files in here that would be hard to find. So can
19:13:45 12 everybody hear me okay?

19:13:47 13 MR. BISHOP: This is Karen Collins from
19:13:47 14 Bechtel, and she's going to talk about Site 4.

19:13:52 15 MS. COLLINS: Well, Site 4 -- I think a lot
19:13:57 16 of you were here in July for the RAB when we went
19:14:00 17 out and did a site visit. We were in the middle
19:14:02 18 of the groundwater investigation, Phase 2 of the
19:14:03 19 RI in July when we met the last time, and I think
19:14:09 20 a lot of you -- I know Craig was out there, and I
19:14:12 21 think Jerry was out at the field demos. We got to
19:14:16 22 see an MMW fence being prepped for sampling.

19:14:21 23 So I wanted to give the RAB an update
19:14:24 24 on the work that was done during the RI and some
19:14:26 25 of the findings. I'm not going to take up a lot

19:14:32 1 of time going over the stuff you've already heard,
19:14:32 2 but I want to go over the site background and
19:14:35 3 history just briefly, over the RI objectives, the
19:14:40 4 RI field work overview, and then some of the data
19:14:41 5 that we've got in hand now. We'll talk about the
19:14:41 6 next steps for Site 4, and then go over the report
19:14:49 7 schedule.

19:14:50 8 Site 4 is a 14-acre, pretty flat --
19:14:51 9 topographically flat site. It's bounded by Harbor
19:14:56 10 Drive on the west, Paleta Creek on the south, San
19:15:00 11 Diego Trolley line on the east, and the City of
19:15:03 12 San Diego Sewer and Pump Station to the north.

19:15:07 13 That may have been some of those odors
19:15:09 14 that were in the field.

19:15:13 15 MR. MURCHISON: That could be.

19:15:14 16 MS. COLLINS: We noticed those odors, too.

19:15:15 17 The site was paved in 1975. It's used
19:15:19 18 for recycling of Navy materials. It's also used
19:15:20 19 for storage and warehousing of DoD property.

19:15:24 20 The site was identified, as was Site
19:15:25 21 3, in the 1986 IAS. The reason it was listed was
19:15:30 22 because of waste oil that was reportedly deposited
19:15:34 23 on the site for dust suppression. That was a
19:15:35 24 common practice. I think everyone's heard about
19:15:38 25 that.

19:15:39 1 Briefly the site history: From 1943
19:15:43 2 to 1975 the Navy used Site 4 as a supply center
19:15:48 3 storage yard. If you look at the earlier photos,
19:15:49 4 there are trucks mostly and vehicles that are
19:15:53 5 parked over there. Not a lot of activity really
19:15:57 6 in those early years.

19:15:59 7 From 1975 to 1981 the site was used as
19:16:07 8 a defense property disposal office or DPDO storage
19:16:08 9 yard. From 1981 to present the site has been
19:16:10 10 partitioned into two. We call it the north half
19:16:11 11 and the south half. The north half is pretty
19:16:16 12 active. In fact, a lot of you have been out to
19:16:19 13 the site at the last RAB in July. They've got all
19:16:22 14 kinds of stuff up there. We'll talk a little bit
19:16:23 15 more about some of the things. And the southern
19:16:27 16 portion of the site is used by DLA, Defense
19:16:31 17 Logistics, for storing landing craft -- boats.

19:16:34 18 We had three central objectives for
19:16:37 19 the RI. The first was to characterize the nature
19:16:40 20 and extent of contamination both in soil and
19:16:42 21 groundwater, the second was to determine risk to
19:16:46 22 human health and the environment, and the third
19:16:49 23 was to compile a dataset suitable to support a
19:16:51 24 risk management decision for the site. Typically
19:16:54 25 that would be either progression to a feasibility

19:16:56 1 study or no further action.

19:17:03 2 The RI field work was broken up into
19:17:05 3 two phases. Phase 1 was soil sampling. We did a
19:17:09 4 total of 60 borings out there. Four of those were
19:17:13 5 deep borings drilled to 50 feet bgs. We collected
19:17:16 6 soil samples for chemical and geotechnical
19:17:18 7 analyses in those deep borings, but we also had a
19:17:22 8 continuous course where we were able to log
19:17:25 9 lithology very accurately all the way down to
19:17:28 10 50 feet.

19:17:30 11 49 borings were on a 100-foot grid.
19:17:33 12 Those were the random samples. The RI was
19:17:36 13 structured so that we could have a real good solid
19:17:38 14 dataset. We had random samples on a 100-foot
19:17:40 15 grid, and then 11 borings were located at
19:17:44 16 judgmental areas where we knew there was previous
19:17:44 17 contamination based on previous sampling that was
19:17:50 18 done at the site.

19:17:52 19 We took three samples per boring at
19:17:55 20 multiple locations. A couple of them we
19:17:57 21 encountered groundwater in a little more shallower
19:17:57 22 type recovery, so I think there were a couple of
19:18:01 23 them we only had two samples from.

19:18:04 24 Phase 2 was a groundwater
19:18:05 25 investigation, and Phases 1 and 2 were punctuated

19:18:08 1 by a meeting with DTSC at the end of June where we
19:18:13 2 sat down and looked at all of the lithology that
19:18:16 3 we had on the site and made some decisions
19:18:17 4 together about ways to optimize the well design.
19:18:22 5 So DTSC actually and the Regional Board, I
19:18:25 6 believe, was in on that meeting as well.

19:18:27 7 One thing I also want to mention is
19:18:30 8 when we did the soil borings for both the soil and
19:18:34 9 the groundwater monitoring wells, we also screened
19:18:36 10 for RAD. That was one of the work plan call outs.
19:18:44 11 We did that. We didn't find anything. We
19:18:44 12 screened for alpha, beta, and gamma and came up
19:18:44 13 with nothing, which was expected. The site
19:18:48 14 history at Site 4 is obviously a lot different
19:18:49 15 than Site 3. It's not quite as complex, which is
19:18:51 16 fine by me.

19:18:56 17 Phase 2 we installed and developed and
19:18:58 18 sampled 11 new wells for the RI. We also sampled
19:19:03 19 three existing monitoring wells. One of the
19:19:07 20 previous wells had been destroyed. The wells out
19:19:13 21 at Site 4 had a pretty hard life. Those landing
19:19:14 22 craft trucks are real heavy and things happen.

19:19:19 23 Aquifer testing and water level study
19:19:23 24 was also done to assess hydraulic communication
19:19:25 25 between groundwater and Paleta Creek.

19:19:29 1 We did -- Pete mentioned doing a
19:19:33 2 25-hour study, and we actually did a 25-hour study
19:19:37 3 during a high high and low low tide to see an
19:19:42 4 extreme scenario. And then we waited for a
19:19:45 5 22-hour period bracketed a mean tidal scenario;
19:19:50 6 and we did a 72-hour water level study. We had
19:19:53 7 transducers or dataloggers in 11 wells plus in
19:19:55 8 Paleta Creek at a surveyed point. We plotted all
19:20:01 9 of that water level data together. We were taking
19:20:04 10 readings every ten seconds. And plotted that, and
19:20:08 11 that graph will be in the RI that you'll see in a
19:20:11 12 couple months.

19:20:12 13 But basically, as Dave said, the water
19:20:15 14 level is moving. Water is still only moving west,
19:20:18 15 and Paleta Creek is actually 90 percent of the
19:20:25 16 time higher -- the water level is higher in the
19:20:27 17 creek than in the groundwater, so there's little
19:20:32 18 or no hydraulic communication between the two.
19:20:35 19 There's a little bit of localized communication
19:20:36 20 between the one well that's right adjacent to the
19:20:41 21 creek. That's also an extremely shallow zone.

19:20:45 22 This is an 1859 bathymetric map of San
19:20:51 23 Diego Bay that shows Naval Station in red and then
19:20:55 24 Site 4 here in yellow. And what's significant
19:20:58 25 about this is the carving of Paleta Creek channel.

19:21:01 1 This is all before the site was reclaimed, and
19:21:07 2 it's basically just a tidal marsh, a very low
19:21:11 3 tidal marsh.
19:21:13 4 Same bathymetric map. This one is
19:21:18 5 from 1930. Again, Naval station boundary in red
19:21:20 6 and Site 4 in yellow. Site 4 is still a
19:21:25 7 topographic low, and you can see that there's been
19:21:28 8 some reclamation of areas of Naval Station north
19:21:31 9 and west of the site.
19:21:34 10 The fill that was used to reclaim this
19:21:39 11 area and Site 4 ultimately and much of coastal
19:21:46 12 downtown San Diego was drawn from a variety of
19:21:46 13 sources. Much of it was hydraulic from the bay.
19:21:49 14 We actually saw shell fragments in a lot of the
19:21:51 15 fill that we saw at Site 4. There may have also
19:21:54 16 been some mechanical fill, but hydraulic fill is a
19:21:57 17 notorious source of PAHs, mostly from pier piling
19:22:02 18 releases.
19:22:03 19 Physical characteristics of the site:
19:22:08 20 the upper six to ten feet of Site 4 is composed of
19:22:11 21 the fill. The site was filled in stages between
19:22:14 22 the '40s and the '60s. And below the fill there's
19:22:18 23 a native clay layer that -- basically that's tidal
19:22:23 24 marsh mud. And that stuff is a very competent
19:22:29 25 clay. It would be great for lining a landfill.

19:22:31 1 We did geotech tests on a number of
19:22:33 2 those samples, and the permeability ranges from 10
19:22:36 3 to the minus 8 to 10 to the minus 9 centimeters
19:22:36 4 per second. Very competent clay.

19:22:42 5 Below that there was a fine-grained
19:22:43 6 unit that contains that clay layer from about 7 to
19:22:49 7 16 feet in the loss, and the surface of that clay
19:22:53 8 layer is well defined.

19:22:54 9 Below the clay, the third unit at the
19:22:56 10 site, is a courser grained water-bearing unit and
19:22:59 11 that's below the clay.

19:23:03 12 Below the course grain unit in the
19:23:05 13 deep borings, the 50 footers, we also encountered
19:23:08 14 a deeper fine-grained unit, and that was about
19:23:11 15 48 feet bgs.

19:23:15 16 The water-bearing unit below the clay
19:23:17 17 is under confined/semiconfined conditions.
19:23:20 18 There's a thin layer, maybe a foot or so of
19:23:23 19 perched water above the clay. That's not really
19:23:27 20 representative aquifer material. And with DTSC
19:23:30 21 and the Water Board, we elected not to screen in
19:23:31 22 that interval but to go below the clay for our
19:23:35 23 wells.

19:23:36 24 This is where I want to show -- this
19:23:49 25 is going to be a 3-D movie clip of the lithology

19:23:53 1 of Site 4. And if you like it, I'll play it twice
19:23:56 2 and kind of talk you through it the first time.
19:23:58 3 It goes a little bit fast. But this is a model of
19:24:03 4 what we saw. The north part and the south part.
19:24:07 5 This is the Paleta Creek channel. Now, here are
19:24:07 6 the three units: the shallow, here's the fill,
19:24:07 7 there's the clay, and below that the course grain
19:24:16 8 material.
19:24:20 9 You can see the fill six to ten feet
19:24:24 10 thick, the clay layer about 16 feet thick in the
19:24:29 11 thick parts.
19:24:30 12 Now what's going to happen is the
19:24:32 13 screen is going to transition in a minute and then
19:24:35 14 it's going to start pulling back and then moving
19:24:35 15 cross-sections from west to east. Here we go.
19:24:45 16 This is the bay mud. This is the fill. And the
19:24:50 17 monitoring wells are going by as we move east.
19:24:57 18 That's it. Does anyone want to see it again? Was
19:25:04 19 once enough? It will be a movie thing in the RI
19:25:08 20 too, so you can see it again.
19:25:10 21 Basically those are the three units at
19:25:15 22 the site, and it's pretty straightforward
19:25:22 23 geologically.
19:25:22 24 The groundwater flow is generally
19:25:22 25 toward Harbor Drive. The lowest groundwater

19:25:25 1 elevation is at MW-10. That's the well that we
19:25:28 2 were at at the RAB when you all were out there.
19:25:32 3 Something funny is going on at that well. That's
19:25:35 4 the lowest water level at the whole site, and the
19:25:40 5 well is in pretty close proximity to an electrical
19:25:43 6 conduit. It's a pretty good size subsurface
19:25:48 7 conduit, and we're suspecting that there may be
19:25:51 8 some interference with the water level as a result
19:25:52 9 of that. We're doing a little more investigating.
19:25:57 10 There's also a huge -- like a six or
19:25:59 11 eight foot sewer main that goes under Harbor
19:26:02 12 Drive that may be affecting water levels as you
19:26:04 13 approach the western boundary of the site.
19:26:07 14 MW-03A is the only well that had a
19:26:13 15 significant response from Paleta Creek. That's
19:26:15 16 the one that's right adjacent to the creek and
19:26:18 17 screened in the shallower push aquifer.
19:26:23 18 MW-06 and MW-07 also respond to Paleta
19:26:25 19 Creek a little more quickly than MW-03A, and that
19:26:25 20 indicates again the confined conditions.
19:26:32 21 I already said water is moving from
19:26:35 22 Paleta Creek 90 percent of the time.
19:26:39 23 This is a water level contour map or
19:26:42 24 potentiometric surface map. The dark blue lines
19:26:45 25 show lines of equal groundwater elevation, and the

19:26:48 1 numbers are mean low low water. So that's two
19:26:53 2 feet and one and a half feet and one foot and it
19:26:56 3 flows from high to low. These are the flow lines
19:27:01 4 and light blue that we derived from that.

19:27:07 5 The soil results: We have over 290
19:27:11 6 samples that were collected for VOCs and
19:27:12 7 pesticides. Those compounds were not reported in
19:27:17 8 any of the soil samples above residential PRGs.

19:27:24 9 I should mention, too, that in the
19:27:26 10 time since the work plan came out, the Navy's made
19:27:28 11 a management decision that the site will be used
19:27:32 12 for continued industrial use, so the residential
19:27:35 13 scenario is really not in the picture at this
19:27:39 14 point. We consulted with Brian Davis, the DTSC
19:27:39 15 toxicologist, and he concurred that there's no
19:27:45 16 reason spending the extra money to do a
19:27:48 17 residential risk assessment, so really the
19:27:50 18 residential is in there for comparison purposes,
19:27:51 19 but we didn't see VOCs or pesticides.

19:28:02 20 Two metals were reported above
19:28:02 21 industrial PRGs. Arsenic -- the ever present
19:28:02 22 arsenic. Actually, the background at Naval
19:28:07 23 Station -- background numbers higher than the
19:28:09 24 industrial PRGS, so we know we just have a
19:28:13 25 regionally elevated concentration.

19:28:16 1 There were two lead samples that were
19:28:18 2 also over the industrial PRGs. They were both
19:28:19 3 located at trench 2 as was the PCBs. There were
19:28:25 4 two samples that were over the industrial PRGs.
19:28:25 5 Those were also in trench 2. Trench 2 is an area
19:28:30 6 that was -- even after the site was filled, it was
19:28:33 7 a little bit low in some of the photos from the
19:28:34 8 '50s, so there was probably another fill event
19:28:39 9 there.

19:28:42 10 Six PAHs were reported at
19:28:42 11 concentrations above PRGs. Nothing really
19:28:49 12 surprising.

19:28:50 13 There were three dioxins/furans
19:28:53 14 reported that were in two locations: one was at
19:28:56 15 MW-12 right next to Trench 2, and those were over
19:29:04 16 the adjusted industrial PRGs. There's so many
19:29:07 17 dioxins and furans. There's not a PRG for each of
19:29:11 18 those, so there's what's called a toxicity
19:29:13 19 equivalency factor that's assigned based on one of
19:29:16 20 the dioxin compounds. And so each one doesn't
19:29:19 21 have a compound, but if you assign the TEF, three
19:29:23 22 of those compounds did exceed the level.

19:29:29 23 We're calculating health risk for
19:29:33 24 industrial and construction worker scenarios
19:29:35 25 currently.

19:29:38 1 This is a map that shows the
19:29:40 2 distribution of the Benzo(a)pyrene in the soil.
19:29:45 3 Back to the reason the site was listed in the IAS,
19:29:47 4 it was listed because of waste oil applications.
19:29:50 5 So Benzo(a)pyrene should be a great tracer for
19:29:54 6 waste oil. And when you look at this, you think
19:30:00 7 "Yeah, maybe so. It's kind of all over the
19:30:04 8 place."
19:30:04 9 What's not reflected in this map is
19:30:06 10 the extreme variability that we're seeing in the
19:30:09 11 data, not just with depth because in a surface
19:30:13 12 application scenario you expect to see higher
19:30:17 13 concentrations at the surface tapering off with
19:30:21 14 depth. What we're seeing are concentrations that
19:30:28 15 are tremendously variable. And in the RI sampling
19:30:30 16 we did actually two analyses per sample, different
19:30:36 17 analytical methods. 8270 and 8310 methods were
19:30:42 18 both used on each of the soil samples. And, you
19:30:46 19 know, the expectation would be that when you take
19:30:49 20 a six-inch soil sample in a tube and collect two
19:30:52 21 30-milligram aliquots and run one for 8270, one
19:30:56 22 for 8310, you'd get about the same number, maybe a
19:31:00 23 little different. It's not at all what we saw.
19:31:07 24 The numbers were all over the map -- order of
19:31:08 25 magnitude, deviations, and not training the same

19:31:10 1 way. In other words, the 8270s weren't always
19:31:12 2 higher. The 8310s weren't consistently lower.
19:31:17 3 Sometimes they were higher; sometimes they were
19:31:18 4 lower. So what that told us was that across the
19:31:23 5 site and even within a single 6-inch interval
19:31:24 6 there was tremendous variability in the PAH
19:31:29 7 distribution.

19:31:33 8 And, you know, one of the kind of
19:31:36 9 obvious reasons for that would be that it was
19:31:38 10 present in the fill -- in the hydraulic fill or in
19:31:41 11 the mechanical fill that was distributed at the
19:31:44 12 site. It's not consistent with the point source
19:31:48 13 or a surface release except for a few localized
19:31:51 14 exceptions.

19:31:51 15 Trench 2 we talked about. SB-12.
19:31:55 16 Both of those are areas that are topographic areas
19:31:59 17 identified on aerial photos.

19:32:03 18 SB-16 in Trench 3 is immediately
19:32:07 19 adjacent to the railroad right-of-way on the
19:32:10 20 western side of the site. PAHs are -- they are
19:32:15 21 actually almost present anywhere you look. You
19:32:19 22 can go to Home Depot and construct a nice raised
19:32:22 23 bed garden out of railroad ties and you'll have
19:32:22 24 PAHs in your garden, and a lot of people do. They
19:32:27 25 are pretty much ubiquitous in the urban and rural

19:32:32 1 environments.

19:32:35 2 At Site 4 some of the non-point
19:32:36 3 sources that we've identified are aerial
19:32:40 4 depositions from the railroads and the roads that
19:32:42 5 are sandwiched right between both of those. The
19:32:45 6 site's been used for car and equipment parking for
19:32:48 7 60 years. And then the reason it was listed is
19:32:51 8 the waste oil application for dust suppression.

19:32:55 9 The nature and extent of PAHs and most
19:32:58 10 of the metals are defined by the distribution and
19:32:59 11 emplacement of the fill that was used at the site,
19:33:04 12 and it's likely the PAHs were already in the fill
19:33:08 13 when it was placed. Again, they might be a great
19:33:11 14 source for PAHs. No PAHs were identified in the
19:33:15 15 underlying native clay. That makes sense. PAHs
19:33:22 16 aren't very soluble or very mobile. And any
19:33:26 17 migration from the fill to the groundwater would
19:33:27 18 be impeded by that clay.

19:33:30 19 So the conclusions, based on the RI
19:33:33 20 data and the previous data, are for soil that the
19:33:38 21 nature and extent of contamination is defined by
19:33:42 22 the fill that was used to reclaim the site from
19:33:45 23 the tidal marsh.

19:33:47 24 PAHs and PCBs and a few isolated
19:33:50 25 metals -- the arsenic and the lead -- are

19:33:51 1 compounds of interest. None of them are looking
19:34:00 2 like real risk drivers or they're not elevating
19:34:02 3 the site risk to significant levels.

19:34:08 4 The current soil data is suitable to
19:34:10 5 perform a risk assessment, and we've actually done
19:34:12 6 a preliminary calculation to the site.

19:34:16 7 Additional soil sampling is not
19:34:16 8 required. There are site boundary constraints
19:34:19 9 that are pretty obvious: the railroad on the west;
19:34:22 10 there's a 50 foot right-of-way that is a buffer;
19:34:26 11 the city pump station to the north. We don't want
19:34:29 12 to drill there; and the trolley on the east and
19:34:31 13 the creek on the south. So the site is really
19:34:33 14 constrained by those boundaries, and there would
19:34:38 15 be little value in additional sampling anyway.

19:34:41 16 Groundwater data: There were three
19:34:45 17 existing wells at the site, two of those are
19:34:50 18 on-site; one is off-site. We drilled 11 new wells
19:34:53 19 and those are the deeper wells.

19:34:55 20 We identified chlorinated solvents
19:34:57 21 PCE, TCE, DCE, and vinyl chloride in some of the
19:35:02 22 groundwater samples. Some of this it wasn't a big
19:35:10 23 surprise. There have been TCE identified in MW-02
19:35:12 24 in the middle of the south part of the site
19:35:15 25 previously. What was a surprise was when we

19:35:19 1 positioned our off-site upgradient wells to have
19:35:23 2 the highest concentrations in Naval Station come
19:35:27 3 from that well.

19:35:29 4 The greater upgradient concentrations
19:35:33 5 obviously suggest an off-site source. There may
19:35:38 6 be a regional situation here. There's not a lot
19:35:41 7 of data so it's kind of early to guess about this,
19:35:43 8 but we know there are two studies that have
19:35:44 9 already been done. One is at Building 3300 which
19:35:49 10 is the Navy's medical building just a little bit
19:35:54 11 east and maybe a quarter of the way down from the
19:35:59 12 north part of Site 4. In 1996 there was a UST
19:36:03 13 study done for that building, and they found about
19:36:07 14 21 parts per billion of TCE in a grab sample. It
19:36:13 15 was a push sample, so we don't know with great
19:36:14 16 accuracy where it was from, but that was reported.

19:36:20 17 And in Building 3155, which is the
19:36:23 18 warehouse across the Creek, a 1992 sample there
19:36:27 19 reported PCE concentrations of 27 and 33 micograms
19:36:32 20 per liter, and the TCE at 3 and 4 micrograms per
19:36:33 21 liter. And then, in addition, we did a limited
19:36:42 22 file review and found that there's a lot of
19:36:45 23 potential sources upgradient.

19:36:48 24 So the conclusions from the
19:36:49 25 groundwater data are the VOCs, although they were

19:36:52 1 reported at Site 4, they're at higher
19:36:56 2 concentrations in off-site upgradient wells, and
19:37:00 3 they're not from a release at Site 4.
19:37:04 4 There's been no on-site VOC source
19:37:07 5 identified in all the samples we collected.
19:37:07 6 Nothing in the site history, too, that would
19:37:11 7 suggest the source. The highest VOC
19:37:14 8 concentrations are offsite. VOCs present in Site
19:37:21 9 4 are in the confined groundwater below that thick
19:37:24 10 clay layer that we just looked at. VOCs are not
19:37:28 11 reported in the wells that are screened above the
19:37:30 12 clay layer, and the compounds that are in the
19:37:36 13 groundwater are entirely unrelated to the
19:37:37 14 compounds that are in the soil.
19:37:40 15 Next Steps: We'll proceed with the
19:37:44 16 risk assessment, and the numbers look good. They
19:37:47 17 look a lot like what we calculated in 2000 in the
19:37:48 18 RSE. Risk on the low end, on the good end of the
19:37:55 19 NCP acceptable risk range for industrial worker.
19:38:02 20 Groundwater ingestion is not a
19:38:03 21 pathway. It's a nonbeneficial use aquifer. The
19:38:07 22 VOC vapor pathway is not applicable because of the
19:38:09 23 clay layer. We did incorporate the VOCs. They
19:38:15 24 were low low, like jay flag mostly value in the
19:38:18 25 soil. Those are in the Johnson & Ettinger model.

19:38:24 1 We're preparing our RI report now, and
19:38:25 2 it's scheduled to go to the Navy in March. The
19:38:29 3 Navy will review it. We'll revise it accordingly
19:38:31 4 and then issue it to the agencies and the RAB in
19:38:35 5 May.

19:38:37 6 The project is right on schedule.
19:38:37 7 It's right where we plan to be. We plan to
19:38:40 8 deliver it March 4th, I think. The original
19:38:47 9 schedule we're going to be about two weeks behind
19:38:48 10 that, so it's pretty good.

19:38:50 11 And I think the Navy's planning to
19:38:54 12 initiate a groundwater investigation independent
19:39:00 13 of Site 4. Site 4 is not a source that the Navy
19:39:03 14 would -- it's obviously interested in knowing
19:39:06 15 where that groundwater keeps coming from.

19:39:10 16 Any questions?

19:39:14 17 MR. BISHOP: Thank you.

19:39:19 18 MS. COLLINS: Here's the TCE plume. This
19:39:23 19 is the Navy Medical building. This is where TCE
19:39:29 20 was reported in '96, so we know it's up here. We
19:39:32 21 had a 100 parts per billion in MW-14 in our
19:39:32 22 off-site upgradient wells. Highest concentrations
19:39:38 23 and on-site concentrations taper off pretty
19:39:43 24 dramatically.

19:39:48 25 MR. HEIRONIMUS: You might want to point

19:39:49 1 out why the plume or whatever ends at the site
19:39:53 2 boundary.

19:39:54 3 MS. COLLINS: The plume was truncated at
19:39:55 4 the site boundary. The contours continue, but
19:39:59 5 this was done using a 3-D screening model, and it
19:40:05 6 was wrapping around MW-14, and it's really an open
19:40:10 7 ended contour. We know there's a source up here.
19:40:11 8 We don't know that there's a boundary on the other
19:40:12 9 side of MW-14 here. So the plumes are truncated
19:40:20 10 at the Site 4 boundary.

19:40:23 11 MR. MURCHISON: So you've trimmed them off.

19:40:26 12 MS. COLLINS: Yeah, we trimmed them. MW-05
19:40:26 13 was a no detect.

19:40:31 14 MR. HEIRONIMUS: The model required a
19:40:31 15 boundary to be complete.

19:40:40 16 MS. MORLEY: Does anybody have questions in
19:40:43 17 general on anything? Okay.

19:40:46 18 Darren was thinking about meeting
19:40:46 19 here, but since we're being kicked out, hopefully
19:40:46 20 our next meeting is going to be in July and maybe
19:40:53 21 we could do something in the field again and maybe
19:40:56 22 instead of even a demonstration, something like a
19:40:58 23 hands on. If you'd be interested in doing some
19:41:02 24 kind of sampling or something like that -- playing
19:41:06 25 in the field.

19:41:12 1 CMDR KEMP: Is our next meeting in July or
19:41:14 2 April?
19:41:14 3 MS. MORLEY: April. I'm sorry. April. It
19:41:19 4 might be too cold and dark that early.
19:41:22 5 Does anyone have any --
19:41:43 6 MR. STANG: The 7th is when the time
19:41:27 7 changes.
19:41:56 8 MS. MORLEY: Does anyone have any suggested
19:41:59 9 agenda topics for the next RAB then? Okay.
19:42:14 10 CMDR KEMP: Can I just make a comment?
19:42:14 11 I mentioned a little bit earlier about
19:42:17 12 a meeting I went to yesterday, and I'll have to
19:42:22 13 read the name of it because it's kind of long, but
19:42:24 14 it's "California Office of Military Base Retention
19:42:29 15 and Reuse Workshop." And it's some study, I
19:42:35 16 guess, that the State of California has done. And
19:42:37 17 it looked at a lot of different studies.
19:42:37 18 It was kind of focused at impacts of
19:42:44 19 the Navy on the community and the community on the
19:42:49 20 Navy. And the invitees included representatives
19:42:56 21 from some elected officials, Navy representatives,
19:42:59 22 city planning, and there's a bunch of things they
19:43:02 23 were looking at that will be, I guess, brought
19:43:06 24 back to Sacramento to be discussed in some sort of
19:43:08 25 report, I suspect.

19:43:10 1 But one thing that came out of it, a
19:43:12 2 lot of folks who don't know the Navy, know that
19:43:19 3 we're here, are either suspicious -- or that's
19:43:23 4 probably a bad term -- but just don't know what's
19:43:27 5 going on. There's not a lot of -- the good news
19:43:29 6 stories don't get told, and there is a lack of --
19:43:33 7 some of the folks feel there's a lack of dialogue
19:43:34 8 in planning and things like this. Actually, the
19:43:41 9 RABs were kind of mentioned as a means of
19:43:45 10 dialogue.

19:43:46 11 What I took out of there was you can't
19:43:47 12 communicate enough. And a forum like this is a
19:43:53 13 very viable thing. There's certainly points of
19:43:55 14 disagreement. There's a couple of sites that were
19:43:57 15 mentioned today. But having that disagreement in
19:43:59 16 a forum like this where you can address the
19:44:00 17 issues, talk about the issues, move forward a lot
19:44:06 18 better than not having the disagreement in a forum
19:44:08 19 like this and find out about it after the fact
19:44:10 20 that we have the disagreement.

19:44:11 21 So it's just an observation. This is
19:44:14 22 my second one of these. I think there's a lot of
19:44:18 23 value added that I see from the Navy side, anyway,
19:44:20 24 and hopefully from the public side of doing this.

19:44:24 25 When you're searching for topics for

19:44:27 1 the next RAB, I don't know if there is something
19:44:33 2 that maybe -- we've had very confined discussions.
19:44:37 3 If there's something else out there that is of
19:44:41 4 interest, we might want to open it up.

19:44:48 5 MS. MORLEY: Does that bring up anything?

19:44:50 6 MR. BISHOP: I'm just looking at the chart
19:44:51 7 here. That one plume down to the south in RI 4
19:45:00 8 that we just looked at, just eyeballing the line,
19:45:05 9 it looks like you could just about draw a straight
19:45:10 10 line back over to the old hobby shop.

19:45:14 11 MS. MORLEY: That's one of the ones that
19:45:14 12 we're looking at because that's actually an issue
19:45:16 13 we want to resolve in risk management, but
19:45:18 14 actually if you look at the plumes and look at the
19:45:22 15 sites, it goes back here. So it looks like it's
19:45:25 16 kind of open. It looks like that it's possible
19:45:28 17 that that might be a contributor, but I think it's
19:45:30 18 probably coming from off base just because of the
19:45:32 19 concentrations there are so much higher than at
19:45:37 20 the Navy Medical, which was a UST. That was where
19:45:41 21 we got the sample from was that UST and we
19:45:44 22 actually sampled for that.

19:45:46 23 MR. BISHOP: Well, that spoiled my theory
19:45:47 24 of oil at the old hobby shop.

19:46:02 25 I don't have anything in particular to

19:46:02 1 talk about. Very thorough presentations.

19:46:27 2 MS. MORLEY: Would you guys be interested
19:46:27 3 in like maybe total maximum daily loads? Naval
19:46:32 4 Station has to come up with the MDLs for Chollas
19:46:36 5 and Paleta Creek, and we're discussing that with
19:46:39 6 the Water Board right now. Even though we
19:46:43 7 eventually have to go through San Diego/National
19:46:45 8 City because, obviously, the Paleta/Chollas Creek
19:46:50 9 runs along the urban water shed before it -- we're
19:46:52 10 the very end of the line, but would you be
19:46:55 11 interested in learning about something like that?

19:46:59 12 MR. BISHOP: That has been an issue a
19:46:59 13 couple of times before where the contamination
19:47:04 14 into the creek ends up at the Naval Station and
19:47:08 15 it's from an upstream source. It's not being
19:47:12 16 generated here, and yet we're the ones that have
19:47:15 17 to deal with it.

19:47:17 18 MS. MORLEY: Well, basically that's the
19:47:17 19 read we're getting from the Water Board is that
19:47:22 20 may be but prove it, so that's coming.

19:47:25 21 MR. McNUTT: Are you doing any long-range
19:47:27 22 studies?

19:47:29 23 MS. MORLEY: Well, the MDLs comes from
19:47:32 24 what's called a 303D report. The 303D
19:47:35 25 incorporates the water bodies. The state lists

19:47:40 1 them and sends it to EPA. And with 303D sites you
19:47:44 2 have to determine for which chemicals it was
19:47:47 3 listed for, yet you're going to do what the MDLs,
19:47:51 4 maximum daily loads, that go into that water body
19:47:55 5 and what you're going to do to meet that standard
19:47:57 6 once you've established it. And, unfortunately,
19:48:00 7 for Chollas and Paleta Creek it was total
19:48:04 8 chemistry. So it's kind of a bay goal to me.

19:48:13 9 CMDR KEMP: Is there a way to get Phase 2
19:48:12 10 permitted?

19:48:12 11 MS. MORLEY: It's tied into it, but it's
19:48:15 12 kind of a separate program. It's not under the
19:48:16 13 MPDS permit. It's under a different regulation
19:48:19 14 program. But the Water Board has been working
19:48:24 15 with SPWARS, and remember SPAWARS were the people
19:48:27 16 that did the sediment study for us. And
19:48:29 17 eventually we're going to try to do the RI program
19:48:35 18 because there's also concern that the RI sites are
19:48:38 19 contaminated with sediments, which it's possible;
19:48:42 20 but how do you determine, looking at sediments
19:48:43 21 only, which pieces of contamination came from the
19:48:47 22 Navy and which came from other places. Unless you
19:48:52 23 look at groundwater or something like that, you
19:48:54 24 can't really make that determination.

19:48:56 25 And so I think the MDL thing might be

19:49:00 1 tied into the IR program, these particular RI
19:49:03 2 sites. I don't know that the Navy under the
19:49:05 3 current contract can afford the cost of
19:49:09 4 remediating. I don't know if you know this.
19:49:11 5 Southwest and National shipyard went through this
19:49:15 6 and they just did that remedial action where they
19:49:17 7 had to dredge out all the sediment, and that was
19:49:20 8 part -- that was their remedial action for that,
19:49:22 9 so we're probably headed down that same road.

10 MR. BISHOP: Where were the sediments from?

11 MS. MORLEY: Paleta and Chollas Creek. And
12 then, again, between Piers 2 and 8, that whole --
13 here's the creek and here's Naval Station. That's
14 the outside part, but the inside part is the
15 city's. We'll have to come back and involve the
16 city. It's not just the Navy, but right now the
17 Navy is the only one that's working with the Water
18 Board to try to establish that. I don't know if
19 you guys are interested in that or anything else
20 that comes up.

21 Okay. You're free to go. Thank you
22 for listening.

23

24 (Whereupon at 7:55 p.m. the meeting
25 was adjourned.)

1 STATE OF CALIFORNIA)

2 : ss

3 COUNTY OF SAN DIEGO)

4

5 I, Nancy A. Lee, CSR No. 3870, do hereby
6 certify that I reported in shorthand the above
7 proceedings on Wednesday, January 29, 2003, at
8 Anchors & Spurs, 2245 Division Street, City of
9 National City, County of San Diego, State of
10 California; and I do further certify that the
11 above and foregoing pages numbered 1 to 87,
12 inclusive, contain a true and correct transcript
13 of all of said proceedings.

14 Dated: _____, 2003.

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20 _____
NANCY A. LEE

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LEE & ASSOCIATES